

HDBI series

CENTRIFUGAL FAN

engineering data
and specifications



CININNATI FAN 

Since the founding of Cincinnati Fan in 1956, the company's mission has been to provide quality products at competitive prices, backed by depend-able service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 hp. But specialization does not mean the product line is small. Cincinnati Fan offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

CINCINNATI FAN PROVIDES

- ◆ Technical evaluation for correct performance conditions
- ◆ Review of air stream and ambient conditions that require special attention
- ◆ Selection of proper components to meet required design specifications
- ◆ Selection of proper accessories
- ◆ System analysis for proper fan design

Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

With support like this, you can be sure your Cincinnati Fan product will be well-built and will provide maximum dependability and longevity.

Cincinnati Fan has over 170 experienced sales engineers across the US and Canada ready to serve your air handling needs.

EFFICIENCY OF AN AIRFOIL WHEEL VERSUS. A BACKWARD INCLINED WHEEL

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The curve overlays below comparing a HDBI-220 and a HDBI-220 illustrates a 10% increase in static efficiency for the airfoil design versus the backward inclined design in the normal selection range. This benefit results in lower brake horsepower consumption and a reduction in sound levels of 2-6 dBA.

HDBI FEATURES

A - Backward inclined blades are fabricated of heavy-gauge, high-strength steel to assure long lasting, efficient operation.

B - Turned, ground and polished shafting assures smooth operation. A rust preventative coating is applied prior to shipment

C - Heavy-duty, self-aligning, relubricatable, ball bearings in cast-iron pillow blocks. Bearings are selected for optimal performance depending on fan size and class.

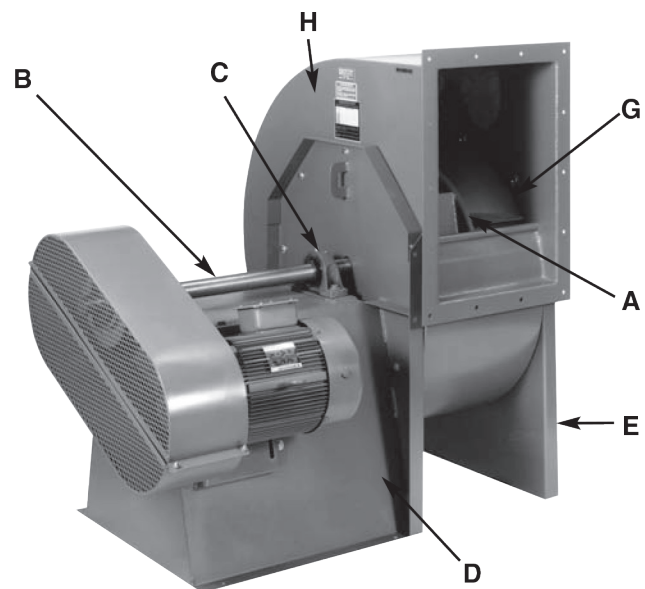
D - Bearing base is heavy steel construction with internal supports to maximize rigidity and assure long equipment life. Arrangement 1 fans can be converted to Arrangement 9 with the addition of the motor slide base.

E - Inlet side support is used to assure a vibration-free, stable housing.

F - Slip collar inlet (not shown) is used for duct work connection. Flanged inlet optional.

G - Inlet bell is designed for smooth air entrance into the wheel inlet for maximum efficiency.

H - Reversible housing provides increased configuration flexibility. Removable side plates allow the wheel to be removed from the motor or inlet side of the housing. Housings are rotatable in 45 degree increments. Wheels are not reversible. See note at right.



Note: HDBI-330 and HDBI-360 housings are not rotatable or reversible.

ARRANGEMENT 4 and ARRANGEMENT 4HM DIRECT DRIVE ADVANTAGES

All sizes available in 100% to 50% widths in 5% increments

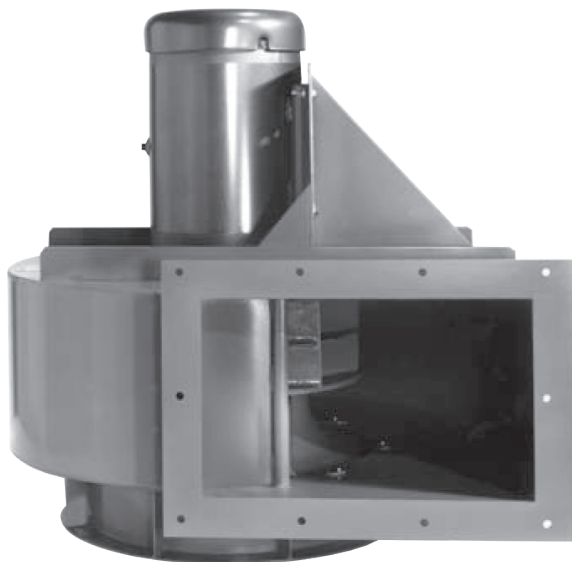


Shown with optional inlet and discharge flanges

ADVANTAGES

- ◆ Compact—requires less space
- ◆ Weighs Less—requires less supporting structure
- ◆ Less Maintenance—no belts or fan bearings to replace
- ◆ Less Expensive—above features result in lower first cost and lower maintenance costs
- ◆ More Ratings—the combination of several motor speeds and eleven fan widths results in a vast selection of direct drive ratings
- ◆ Temperature—good up to 200°F (93°C)

⚠ Caution—All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source. Read and understand operating instructions.



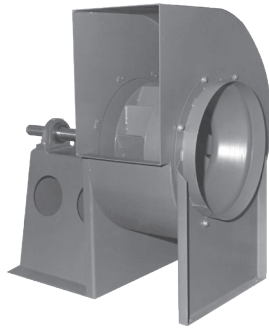
Shown with optional inlet and discharge flanges

4HM HORIZONTAL MOUNTING OPTION

Ideal for bag house or other equipment requiring the simplicity of a horizontally mounted fan. Motors are limited to frame 365T maximum.

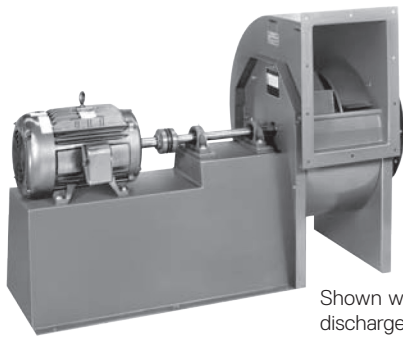
This mounting is available on all sizes. All horizontal mount housings are non-reversible. Inlet flange is optional and must be added if required. Supporting equipment must be adequate to support weights shown on page 26 plus motor weight.

SIX STANDARD ARRANGEMENTS



Arrangement 1 - Belt Drive

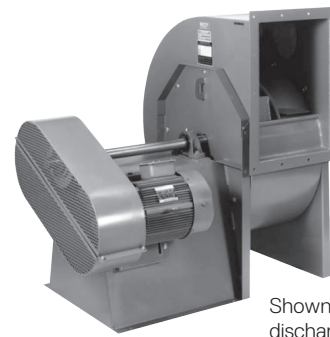
- ♦ Motor not mounted on bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



Shown with optional discharge flange

Arrangement 4 - Direct Drive

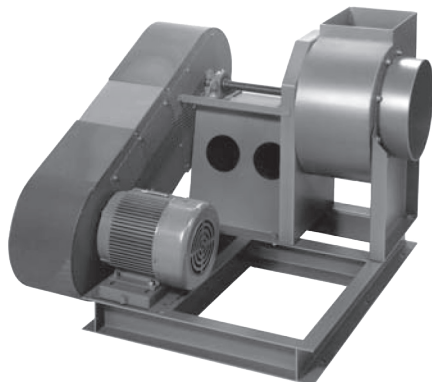
- ♦ Motor mounted on motor base
- ♦ Wheel mounted on motor shaft
- ♦ Maximum temperature of standard design 200°F (93°C) High temperature design not available



Shown with optional discharge flange

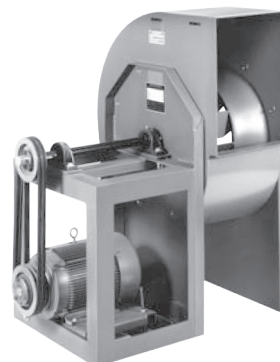
Arrangement 8 - Direct Drive

- ♦ Motor mounted on motor base extending beyond the bearing base Shaft/coupling guard is standard—shown with guard removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



Arrangement 9 - Belt Drive

- ♦ Motor mounted on an adjustable slide base on the side of the bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



Arrangement 9CB - Belt Drive

- ♦ Same as Arrangement 9 except motor and fan are mounted on a common channel base
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)

Arrangement 10 - Belt Drive

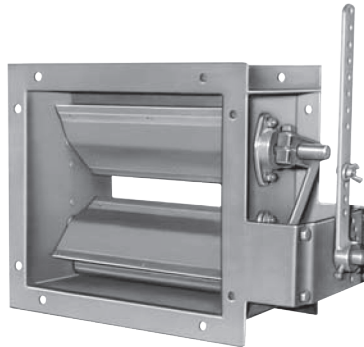
- ♦ Motor mounted on an adjustable slide base under the fan shaft Shown with weather cover removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design not available

OPTIONS



Shaft Seal

Teflon shaft seal good to 400°F (204°C). Ceramic fiber gasket material with steel cover plate above 400°F (205°C).



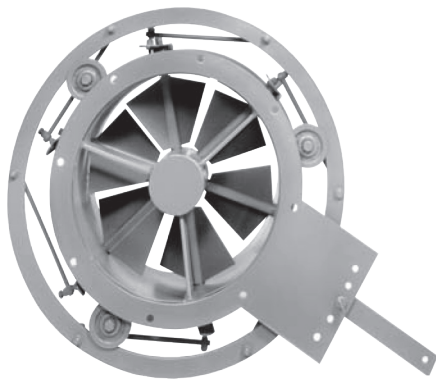
Outlet Damper

All dampers are 1 or 2 blade. All dampers 10" deep flange to flange. Opposed blade construction is standard.



Belt Guard

Belt guard standard on Arrangement 9 and 9CB only. Painted safety yellow.



Inlet Vane Control

Linkage assembly is external on smaller sizes, internal on larger sizes. Inlet vane depth varies with inlet diameter. Contact your local Cincinnati Fan sales representative for dimensions.



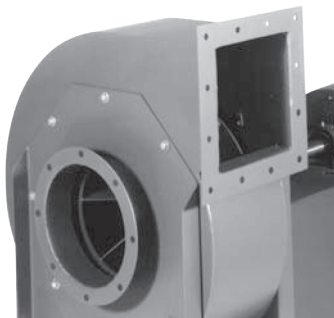
Inspection Door

Bolted or quick-release doors positioned as specified on scroll. Rubber gasket standard up to 250°F (121°C) Ceramic fiber gasket standard at temperatures above 250°F (122°C).



Drain Connection

3/4" pipe coupling welded to lowest point of housing. Not required on BH discharge position.



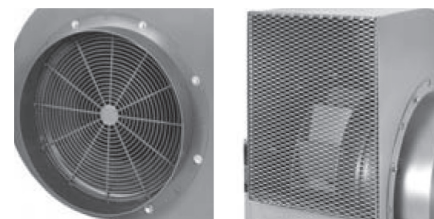
Inlet and Outlet Flange

Flanges on inlet and outlet available where installation requires tight duct connections. Standard hole pattern furnished. Outlet flange not available on some discharge positions. Outlet flange standard on all sizes 270 through 360. See page 31 for dimensions.



Shaft and/or Heat Slinger Guard

Guard available on Arrangement 1, 9 and 9CB. Covers bearings and shaft between fan housing and belt guard. Has extended lube lines. Standard on high temperature fans above 301°F(150°C). Painted safety yellow.



Inlet and Outlet Guards

Ring guard on inlet and expanded metal on discharge. Meets OSHA approval.

SPARK-RESISTANT CONSTRUCTION

Type A: All parts in contact with airstream are of nonferrous material. (Contact your local Cincinnati Fan sales representative).

Type B: Fabricated aluminum wheel and aluminum rubbing ring on motor shaft or fan shaft. Maximum Temperature 200°F (93°C) all arrangements.

Type C: Consists of aluminum inlet bell and aluminum plate on drive side of the fan. Maximum Temperature is the same as for high temperature construction below for each arrangement.

HIGH TEMPERATURE CONSTRUCTION

- Standard Construction:** Arrangements 1, 8, 9, 9CB and 10 suitable to 300°F (149°C). Arrangements 4 and 4HM suitable to 200°F (93°C).
- 201° to 400°F. Construction:** Standard fan with heat slinger, slinger guard, Teflon shaft seal and extended hub on wheel. Arrangements 4 and 4HM only.
- 301° to 400°F. Construction:** Standard fan with heat slinger, fan shaft and slinger guard and Teflon shaft seal. Arrangements 1, 8, 9 and 9CB.
- 401° to 600°F Construction:** Standard fan with heat slinger, fan shaft and slinger guard, high temperature shaft seal, gaskets and paint. Arrangements 1, 8, 9 and 9CB.
- 601° to 750°F Construction:** Standard fan with high temperature bearings, heat slinger, fan shaft and slinger guard, high temperature bearings, shaft seal, gaskets and paint. Arrangements 1, 8, 9 and 9CB.

⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking. The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark-resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

Wheel Size	Maximum RPM Aluminum Wheel [†]
120	5400
130	4999
150	4712
160	4285
180	3885
200	3574
220	3550
240	2837
270	2476
300	2300
330	2300
360	1950

Temperature Range °F	Maximum RPM Reduction Factor [†]
Up to 175°	0%
176° - 200°	2%
201° - 300°	4%
301° - 400°	7%
401° - 500°	11%
501° - 600°	15%
601° - 700°	20%
701° - 750°	30%

[†] Steel wheels only

[†] Up to 200°F (93°C). Consult your local Cincinnati Fan sales rep for higher temperature and/or higher RPMs

TEMPERATURE - ALTITUDE ADJUSTMENT

Air Temperature °F	Altitude in Feet Above Sea Level										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0°	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40°	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.32	1.36
70°	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80°	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48
100°	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48	1.54
120°	1.09	1.14	1.18	1.23	1.28	1.32	1.38	1.43	1.48	1.53	1.58
140°	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54	1.58	1.65
160°	1.17	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.59	1.64	1.70
180°	1.21	1.26	1.30	1.36	1.41	1.46	1.52	1.58	1.64	1.70	1.75
200°	1.25	1.29	1.34	1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81
250°	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.74	1.82	1.88	1.94
300°	1.43	1.49	1.55	1.61	1.67	1.74	1.80	1.87	1.94	2.00	2.08
350°	1.53	1.59	1.65	1.72	1.78	1.85	1.92	2.00	2.07	2.14	2.22
400°	1.62	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20	2.27	2.35
450°	1.72	1.79	1.86	1.93	2.00	2.08	2.16	2.24	2.33	2.41	2.50
500°	1.81	1.88	1.96	2.03	2.11	2.19	2.28	2.36	2.46	2.54	2.62
550°	1.91	1.98	2.06	2.14	2.22	2.30	2.40	2.49	2.58	2.68	2.77
600°	2.00	2.08	2.16	2.24	2.33	2.42	2.50	2.61	2.71	2.80	2.90
650°	2.10	2.18	2.26	2.35	2.44	2.54	2.63	2.74	2.84	2.94	3.04
700°	2.19	2.27	2.36	2.46	2.55	2.65	2.75	2.86	2.97	3.06	3.18
750°	2.28	2.37	2.47	2.56	2.66	2.76	2.87	2.98	3.10	3.19	3.31

Fan performance tables are developed using standard air which is 70°F, 29.92" barometric pressure and .075 lb/ft³ per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data. Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

EXAMPLE: Select a belt driven HDBI-300 to deliver 8327 CFM at .5" SP at 200°F, and 7000' altitude.

Step 1 - From the table, conversion factor is 1.63.

Step 2 - Correct static pressure is:

$$1.63 \times .5" \text{ SP} = .81" \text{ SP at standard conditions.}$$

Step 3 - Check HDBI catalog for 8327 CFM at .81" SP. We select a belt driven HDBI-200 and interpolation gives 660 RPM and 1.83 bhp.

Step 4 - Correct the bhp for the lighter air:

$$1.83 \div 1.63 = 1.12 \text{ bhp.}$$

A 15 hp motor will suffice at 200°F, and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

DIRECT DRIVE RATINGS TABLES

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

Model	RPM	0" SP		1" SP		2" SP		3" SP		4" SP		5" SP	
		CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-120	1150	1143†	0.09										
	1750	1740†	0.31	1316†	0.39								
	3500	3480†	2.51	3282†	2.67	3076†	2.85	2861	3.00	2633	3.13	2379	3.20
HDBI-130	1150	1540†	0.16										
	1750	2344†	0.56	1828†	0.62	1086†	0.59						
	3500	4688	4.50	4457	4.68	4227	4.86	3946	4.93	3656	4.99	3353	5.01
HDBI-150	1150	2100†	0.23	1175†	0.28								
	1750	3195†	0.82	2700†	0.96	2070†	1.00						
	3500	6385	6.59	6155	6.96	5930	7.28	5690	7.57	5405	7.71	5115	7.83
HDBI-160	1150	2795†	0.38	1875†	0.46								
	1750	4250†	1.33	3730	1.53	3080	1.61	2170	1.55				
	3500	8500	10.62	8250	11.12	8000	11.55	7750	11.98	7460	12.26	7140	12.44
HDBI-180	1150	3780†	0.69	2800†	0.82								
	1750	5750	2.40	5195	2.68	4495	2.83	3685	2.87				
	3500	11500	17.58	11225	18.28	10945	18.86	10670	19.44	10395	20.02	10055	20.32
HDBI-200	1150	4975†	0.99	3935†	1.17	2140†	1.10						
	1750	7570	3.47	6960	3.88	6235	4.09	5435	4.23	4390	4.14		
	3500	15140	27.79	14830	28.74	14530	29.50	14225	30.27	13920	31.03	13620	31.80
HDBI-220	1150	6915	1.65	5955	1.99	4720	2.11						
	1750	10520	5.80	9900	6.41	9270	6.89	8610	7.26	7755	7.39	6820	7.42
HDBI-240	1150	9230	2.67	8185	3.15	6945	3.39	4880	3.26				
	1750	14045	9.39	13365	10.22	12680	10.92	11960	11.44	11185	11.85	10205	11.97
HDBI-270	1150	12885	4.68	11780	5.34	10550	5.79	9010	5.93				
	1750	19605	16.49	18885	17.62	18155	18.53	17405	19.37	16575	20.00	15745	20.63
HDBI-300	1150	17670	7.92	16450	8.85	15130	9.54	13630	9.98	11525	9.89		
	1750	26890	27.92	26095	29.54	25290	30.79	24480	32.04	23605	33.06	22680	33.92
HDBI-330	1150	23521	12.76	22173	13.95	20784	15.04	19242	15.79	17420	16.13	14835	15.81
	1750	35793	44.97	34907	46.77	34022	48.58	33136	50.38	32251	52.19	31254	53.42
HDBI-360	1150	30536	19.72	29067	21.26	27597	22.80	25940	23.84	24238	24.79	22104	24.96
	1750	46469	69.47	45503	71.82	44537	74.16	43571	76.51	42605	78.85	41629	81.13

Model	RPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP	
		CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-120	3500	2073	3.18	1578	2.91								
HDBI-130	3500	2996	4.96	2595	4.85	2172	4.71						
HDBI-150	3500	4810	7.94	4510	8.06	4140	8.02	3700	7.87	3200	7.66		
HDBI-160	3500	6820	12.61	6490	12.76	6160	12.90	5825	13.04	5360	12.86	4870	12.64
HDBI-180	3500	9705	20.56	9350	20.80	8990	21.01	8620	21.20	8255	21.40	7885	21.59
HDBI-200	3500	13240	32.13	12850	32.44	12465	32.75	12075	33.04	11675	33.30	11270	33.56
HDBI-220	1750	9175	12.02										
HDBI-270	1750	14730	20.81	13625	20.87	11950	20.29						
HDBI-300	1750	21760	34.77	20685	35.19	19515	35.34	18025	35.05				
HDBI-330	1750	30240	54.56	29226	55.71	28133	56.57	26846	56.77	25560	56.98	23764	56.34
HDBI-360	1150	19092	24.39										
	1750	40522	82.61	39416	84.10	38309	85.58	37203	87.06	35851	87.53	34448	87.80

Model	RPM	12" SP		13" SP		14" SP		15" SP		16" SP		17" SP	
		CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-160	3500	4335	12.39										
HDBI-180	3500	7375	21.34	6865	21.08	6265	20.74						
HDBI-200	3500	10870	33.83	10465	34.09	9935	33.87	9375	33.54	8775	33.15	8130	32.70
HDBI-330	1750	21713	55.28										
HDBI-360	1750	33046	88.06	31056	87.17	28817	85.80						

Performance certified is for installation type B-Free inlet, ducted outlet.

† See pages 25 or 26 for minimum motor frame sizes regardless of bhp

Performance ratings do not include the effects of appurtenances (accessories).



Cincinnati Fan and Ventilator Company certifies that the HDBI Heavy Duty Backward Inclined Fans shown on this page and on pages 12 through 23 are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Fans are capable of operating to the maximum safe speeds shown on each performance table. These speeds permit obtaining the minimum SP/OV limits established as follows:

CLASS II - 8.5" SP at 3000 FPM to 4.25" SP at 4175 FPM.

CLASS III - 13.5" SP at 3780 FPM to 6.75" SP at 5260 FPM. \

CLASS IV - 20" SP at 4600 FPM to 10" SP at 6400 FPM

DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types

The partial width fan ratings shown on this page and on pages 9, 10 and 11 were derived from tests performed in accordance with AMCA Publication 211 and fan laws were applied to arrive at the data shown for partial width fans. However, none of the partial width fans or fans with SQBI wheels are licensed to bear the AMCA seal. All 100% width fans with HDBI wheels are licensed to bear the AMCA seal as shown on pages 7 and 12 through 23.

Model	RPM	Wheel Type	Fan Width	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
				CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-120	1750	SQBI	1/2	813†	0.26	600†	0.26								
	1750	SQBI	3/4	1220†	0.39	900†	0.40								
	1750	HDBI	FULL	1316†	0.39										
	1750	SQBI	FULL	1627†	0.52	1201†	0.53								
	3500	HDBI	1/2	1641†	1.34	1538†	1.42	1430†	1.50	1316†	1.56	1190†	1.60	1037†	1.59
	3500	SQBI	1/2	1858†	1.87	1789†	1.96	1712†	2.03	1627†	2.08	1539†	2.13	1437†	2.14
	3500	HDBI	3/4	2462†	2.00	2307†	2.13	2146†	2.25	1974†	2.35	1785†	2.40	1555†	2.38
	3500	SQBI	3/4	2788†	2.80	2683†	2.93	2568	3.04	2441	3.12	2309	3.19	2155	3.21
	3500	HDBI	FULL	3282†	2.67	3076†	2.85	2861	3.00	2633	3.13	2379	3.20	2073	3.18
HDBI-130	3500	SQBI	FULL	3717	3.73	3578	3.91	3424	4.05	3255	4.16	3079	4.26	2874	4.28
	1750	SQBI	1/2	1127†	0.41	919†	0.44	799†	0.46						
	1750	SQBI	3/4	1690†	0.62	1378†	0.65	1199†	0.70						
	1750	HDBI	FULL	1828†	0.62	1086†	0.59								
	1750	SQBI	FULL	2254†	0.83	1838†	0.87	1599†	0.93						
	3500	HDBI	1/2	2278†	2.27	2175†	2.39	2065	2.46	1953†	2.53	1820†	2.56	1678†	2.57
	3500	SQBI	1/2	2500	3.00	2423	3.12	2346	3.24	2254	3.31	2161	3.39	2065	3.45
	3500	HDBI	3/4	3416	3.41	3263	3.58	3098	3.69	2929	3.80	2730	3.84	2516	3.86
	3500	SQBI	3/4	3750	4.50	3635	4.68	3520	4.86	3381	4.97	3241	5.08	3097	5.18
HDBI-150	3500	HDBI	FULL	4457	4.68	4227	4.86	3946	4.93	3656	4.99	3353	5.01	2996	4.96
	3500	SQBI	FULL	5000	6.00	4846	6.24	4693	6.48	4508	6.63	4322	6.77	4130	6.90
	1750	SQBI	1/2	1535†	0.66	1321†	0.71	1040†	0.70						
	1750	SQBI	3/4	2303†	1.00	1982†	1.06	1560†	1.05						
	1750	HDBI	FULL	2700†	0.96	2070†	1.00								
	1750	SQBI	FULL	3071†	1.33	2643†	1.41	2080†	1.41						
	3500	HDBI	1/2	3078	3.48	2965	3.64	2845	3.79	2703	3.86	2558	3.92	2405	3.97
	3500	SQBI	1/2	3355	4.82	3261	4.99	3166	5.15	3071	5.30	2967	5.40	2862	5.50
	3500	HDBI	3/4	4616	5.22	4448	5.46	4268	5.68	4054	5.78	3836	5.87	3608	5.96
HDBI-160	3500	SQBI	3/4	5033	7.24	4891	7.48	4750	7.72	4607	7.96	4451	8.11	4294	8.26
	3500	HDBI	FULL	6155	6.96	5930	7.28	5690	7.57	5405	7.71	5115	7.83	4810	7.94
	3500	SQBI	FULL	6710	9.65	6522	9.97	6333	10.30	6143	10.61	5934	10.81	5725	11.01
	1750	SQBI	1/2	2090†	1.05	1873†	1.13	1613†	1.16	1183†	1.08				
	1750	SQBI	3/4	3136	1.58	2809	1.69	2420	1.73	1775	1.61				
	1750	HDBI	FULL	3730	1.53	3080	1.61	2170	1.55						
	1750	SQBI	FULL	4181	2.11	3746	2.26	3227	2.31	2366	2.15				
	3500	HDBI	1/2	4125	5.56	4000	5.78	3875	5.99	3730	6.13	3570	6.22	3410	6.31
	3500	SQBI	1/2	4495	7.79	4390	8.03	4285	8.24	4181	8.44	4076	8.62	3969	8.77
HDBI-180	3500	HDBI	3/4	6188	8.34	6000	8.66	5813	8.99	5595	9.20	5355	9.33	5115	9.46
	3500	SQBI	3/4	6742	11.68	6584	12.04	6428	12.37	6271	12.66	6113	12.92	5953	13.16
	3500	HDBI	FULL	8250	11.12	8000	11.55	7750	11.98	7460	12.26	7140	12.44	6820	12.61
	3500	SQBI	FULL	8990	15.58	8779	16.06	8571	16.49	8362	16.88	8151	17.23	7937	17.54
	1750	SQBI	1/2	2871	1.71	2637	1.82	2378	1.89	2057	1.90	1489	1.73		
	1750	HDBI	3/4	3896	1.88	3371	1.97	2764	2.00						
	1750	SQBI	3/4	4307	2.56	3955	2.73	3567	2.84	3086	2.85	2233	2.59		
	1750	HDBI	FULL	5195	2.68	4495	2.83	3685	2.87						
	1750	SQBI	FULL	5743	3.42	5273	3.65	4756	3.78	4114	3.80	2978	3.45		
HDBI-200	3500	HDBI	1/2	5613	9.14	5473	9.43	5335	9.72	5198	10.01	5028	10.16	4853	10.28
	3500	SQBI	1/2	6091	12.76	5974	13.09	5858	13.39	5743	13.67	5627	13.93	5511	14.17
	3500	HDBI	3/4	8419	13.71	8209	14.15	8003	14.58	7796	15.02	7541	15.24	7279	15.42
	3500	SQBI	3/4	9136	19.14	8961	19.63	8787	20.09	8614	20.51	8441	20.90	8267	21.25
	3500	HDBI	FULL	11225	18.28	10945	18.86	10670	19.44	10395	20.02	10055	20.32	9705	20.56
	3500	SQBI	FULL	12181	25.52	11947	26.18	11716	26.79	11486	27.35	11255	27.87	11022	28.34
	1750	SQBI	1/2	3934	2.85	3658	3.02	3371	3.16	3045	3.18	2612	3.09	1722	2.51
	1750	HDBI	3/4	5220	2.91	4676	3.07	4076	3.17	3293	3.11				
	1750	SQBI	3/4	5901	4.27	5487	4.53	5057	4.74	4568	4.77	3918	4.63	2583	3.77
HDBI-200	1750	HDBI	FULL	6960	3.88	6235	4.09	5435	4.23	4390	4.14				
	1750	SQBI	FULL	7868	5.69	7317	6.05	6743	6.33	6091	6.36	5224	6.18	3444	5.03
	3500	HDBI	1/2	7415	14.37	7265	14.75	7113	15.14	6960	15.52	6810	15.90	6620	16.07
	3500	SQBI	1/2	8268	21.53	8135	21.94	8001	22.35	7867	22.76	7734	23.17	7600	23.58
	3500	HDBI	3/4	11123	21.56	10898	22.13	10669	22.70	10440	23.27	10215	23.85	9930	24.10
	3500	SQBI	3/4	12403	32.29	12202	32.91	12002	33.52	11801	34.14	11601	34.76	11401	35.37
	3500	HDBI	FULL	14830	28.74	14530	29.50	14225	30.27	13920	31.03	13620	31.80	13240	32.13
	3500	SQBI	FULL	16537	43.05	16270	43.88	16003	44.70	15735	45.52	15468	46.34	15201	47.16

Performance certified is for installation type B-Free inlet, ducted outlet.
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† Requires a 143T frame or larger even though bhp is available in a 56 frame. See pages 25 or 26.

DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		Model
CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	
																HDBI-120
1330†	2.15	1201†	2.11	1021	1.95											HDBI-120
1996	3.22	1801	3.16	1532	2.93											
1578	2.91															
2661	4.29	2402	4.21	2043	3.90											
																HDBI-130
1951	3.47	1838	3.48	1705	3.45	1559	3.39	1347	3.14							
2927	5.20	2758	5.22	2558	5.18	2339	5.08	2021	4.71							
2595	4.85	2172	4.71													
3903	6.93	3677	6.97	3411	6.91	3119	6.78	2695	6.28							
																HDBI-150
2255	4.03	2070	4.01													
2758	5.60	2643	5.66	2527	5.71	2406	5.74	2244	5.68	2081	5.62	1817	5.35	1086	4.39	
3383	6.05	3105	6.02													
4137	8.41	3965	8.48	3791	8.56	3610	8.61	3367	8.52	3121	8.43	2725	8.02	1629	6.58	HDBI-160
4510	8.06	4140	8.02	3700	7.87	3200	7.66									
5516	11.21	5287	11.31	5055	11.41	4813	11.49	4489	11.37	4162	11.24	3634	10.69	2173	8.77	
																HDBI-160
3245	6.38	3080	6.45	2913	6.52	2680	6.43									
3859	8.91	3746	9.03	3628	9.12	3503	9.20	3370	9.24	3227	9.25	3067	9.22	2885	9.14	
4868	9.57	4620	9.68	4369	9.78	4020	9.65									
5788	13.36	5618	13.54	5441	13.68	5255	13.79	5056	13.86	4840	13.88	4601	13.83	4327	13.70	HDBI-180
6490	12.76	6160	12.90	5825	13.04	5360	12.86	4870	12.64	4335	12.39					
7718	17.82	7491	18.05	7255	18.25	7006	18.39	6741	18.48	6453	18.51	6134	18.45	5769	18.27	
																HDBI-180
4675	10.40	4495	10.51	4310	10.60	4128	10.70	3943	10.80							
5393	14.39	5273	14.59	5150	14.75	5024	14.90	4893	15.03	4756	15.13	4612	15.20	4459	15.24	
7013	15.60	6743	15.76	6465	15.90	6191	16.05	5914	16.19							
8090	21.58	7910	21.87	7726	22.13	7536	22.36	7339	22.55	7134	22.70	6918	22.80	6689	22.86	HDBI-200
9350	20.80	8990	21.01	8620	21.20	8255	21.40	7885	21.59	7375	21.34	6865	21.08	6265	20.74	
10786	28.77	10547	29.16	10301	29.51	10048	29.81	9786	30.06	9512	30.26	9224	30.40	8918	30.48	
																HDBI-200
6425	16.22	6323	16.38	6038	16.52	5838	16.65	5635	16.78	5425	16.92	5233	17.05	4968	16.94	
7458	23.88	7317	24.18	7175	24.48	7033	24.78	6891	25.08	6743	25.30	6580	25.34	6417	25.38	
9638	24.33	9349	24.56	9056	24.78	8756	24.98	8453	25.17	8153	25.37	7849	25.57	7451	25.40	
11188	35.82	10975	36.27	10762	36.72	10550	37.17	10337	37.62	10115	37.95	9870	38.01	9626	38.07	
12850	32.44	12465	32.75	12075	33.04	11675	33.30	11270	33.56	10870	33.83	10465	34.09	9935	33.87	
14917	47.76	14364	48.36	14350	48.96	14066	49.56	13783	50.16	13487	50.60	13160	50.68	12834	50.76	

Performance certified is for installation type B-Free inlet, ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories).

† Requires a 143T frame or larger even though bhp is available in a 56 frame. See pages 25 or 26.

DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types

The partial width fan ratings shown on this page and on pages 8, 9 and 11 were derived from tests performed in accordance with AMCA Publication 211 and fan laws were applied to arrive at the data shown for partial width fans. However, none of the partial width fans or fans with SQBI wheels are licensed to bear the AMCA seal. All 100% width fans with HDBI wheels are licensed to bear the AMCA seal as shown on pages 7 and 12 through 23.

Model	RPM	Wheel Type	Fan Width	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
				CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-220	1750	HDBI	1/2	4950	3.21	4635	3.45	4305	3.63	3878	3.70				
	1750	SQBI	1/2	5375	4.43	5104	4.69	4777	4.83	4443	4.97	4092	5.07	3655	5.08
	1750	HDBI	3/4	7425	4.81	6953	5.17	6548	5.45	5816	5.54				
	1750	SQBI	3/4	8063	6.65	7656	7.03	7166	7.25	6664	7.45	6138	7.60	5483	7.62
	1750	HDBI	FULL	9900	6.41	9270	6.89	8610	7.26	7755	7.39	6820	7.42		
	1750	SQBI	FULL	10750	8.87	10209	9.37	9555	9.67	8886	9.93	8184	10.13	7311	10.16
	3500	HDBI	1/2	10364	23.77	10209	24.34	10054	24.91	9899	25.48	9744	26.05	9589	26.62
HDBI-240	3500	HDBI	3/4	15547	35.66	15314	36.51	15081	37.37	14849	38.22	14616	39.08	14383	39.94
	3500	SQBI	FULL	20729	47.54	20419	48.68	20109	49.82	19799	50.97	19488	52.11	19178	53.25
	1750	HDBI	1/2	6683	5.11	6340	5.46	5980	5.72	5593	5.93	5103	5.99		
	1750	SQBI	1/2	7250	7.12	6955	7.47	6618	7.72	6258	7.92	5884	8.08	5497	8.21
	1750	HDBI	3/4	10024	7.67	9510	8.19	8970	8.58	8389	8.89	7654	8.98		
	1750	SQBI	3/4	10875	10.68	10433	11.20	9928	11.58	9388	11.87	8826	12.12	8246	12.32
	1750	HDBI	FULL	13365	10.22	12680	10.92	11960	11.44	11185	11.85	10205	11.97	9175	12.02
HDBI-270	1750	SQBI	FULL	14500	14.25	13911	14.93	13237	15.43	12517	15.83	11769	16.16	10995	16.43
	1750	HDBI	1/2	9443	8.81	9078	9.27	8703	9.69	8288	10.00	7873	10.32	7365	10.42
	1750	SQBI	1/2	9764	11.46	9440	11.92	9106	12.36	8709	12.62	8312	12.89	7898	13.10
	1750	HDBI	3/4	14161	13.22	13616	13.90	13054	14.53	12431	15.00	11803	15.47	11048	15.61
	1750	SQBI	3/4	14647	17.20	14161	17.89	13659	18.53	13064	18.93	12469	19.33	11848	19.65
	1750	HDBI	FULL	18885	17.62	18155	18.53	17405	19.37	16575	20.00	15745	20.63	14730	20.81
	1750	SQBI	FULL	19529	22.93	18881	23.85	18212	24.71	17418	25.24	16625	25.78	15797	26.21
HDBI-300	1750	HDBI	1/2	13048	14.77	12645	15.40	12240	16.02	11803	16.53	11340	16.96	10880	17.39
	1750	SQBI	1/2	13496	19.30	13136	19.94	12775	20.57	12377	21.08	11936	21.44	11495	21.81
	1750	HDBI	3/4	19571	22.16	18968	23.09	18360	24.03	17704	24.80	17010	25.44	16320	26.08
	1750	SQBI	3/4	20244	28.96	19704	29.91	19163	30.86	18565	31.61	17904	32.16	17242	32.71
	1750	HDBI	FULL	26095	29.54	25290	30.79	24480	32.04	23605	33.06	22680	33.92	21760	34.77
	1750	SQBI	FULL	26992	38.61	26272	39.87	25551	41.14	24754	42.15	23872	42.88	22990	43.61
	1750	HDBI	1/2	17453	23.38	17011	24.28	16568	25.19	16125	26.09	15627	26.71	15120	27.28
HDBI-330	1750	SQBI	1/2	19051	34.49	18555	35.13	18059	35.77	17538	36.25	16985	36.53	16432	36.81
	1750	HDBI	3/4	26180	35.07	25516	36.43	24852	37.78	24188	39.14	23441	40.07	22680	40.92
	1750	SQBI	3/4	28576	51.73	27832	52.69	27088	53.65	26307	54.38	25478	54.79	24648	55.21
	1750	HDBI	FULL	34907	46.77	34022	48.58	33136	50.38	32251	52.19	31254	53.42	30240	54.56
	1750	SQBI	FULL	38102	68.98	37110	70.26	36118	71.54	35076	72.50	33970	73.06	32864	73.62
	1750	HDBI	1/2	22751	35.91	22268	37.08	21785	38.25	21302	39.43	20814	40.57	20261	41.31
	1750	SQBI	1/2	25982	57.19	25433	58.06	24884	58.93	24336	59.79	23747	60.35	23134	60.73
HDBI-360	1750	HDBI	3/4	34127	53.86	33402	55.62	32678	57.38	31954	59.13	31221	60.85	30391	61.96
	1750	SQBI	3/4	38973	85.79	38150	87.09	37327	88.39	36504	89.69	35620	90.53	34702	91.10
	1750	HDBI	FULL	45503	71.82	44537	74.16	43571	76.51	42605	78.85	41629	81.13	40522	82.61

Model	RPM	Wheel Type	Fan Width	15" SP		16" SP		17" SP		18" SP		19" SP		20" SP	
				CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDBI-160	3600	SQBI	1/2	2664	8.96	2366	8.61								
	3600	SQBI	3/4	3996	13.44	3549	12.92								
	3600	SQBI	FULL	5328	17.92	4732	17.22								
HDBI-180	3600	SQBI	1/2	4295	15.24	4114	15.18								
	3600	SQBI	3/4	6442	22.86	6171	22.78								
	3600	SQBI	FULL	8589	30.47	8229	30.37								
HDBI-200	3600	SQBI	1/2	6254	25.42	6091	25.46	5922	25.47	5690	25.21	5457	24.96	5224	24.70
	3600	SQBI	3/4	9381	38.13	9137	38.18	8884	38.20	8535	37.82	8185	37.44	7836	37.06
	3600	SQBI	FULL	12508	50.83	12182	50.91	11845	50.94	11380	50.43	10914	49.92	10449	49.41
HDBI-220	3600	HDBI	1/2	7975	29.46	7753	29.55	7531	29.64	7309	29.73	7066	29.72	6822	29.70
	3600	HDBI	3/4	11963	44.19	11630	44.33	11297	44.46	10964	44.59	10600	44.58	10233	44.54
	3600	HDBI	FULL	15951	58.93	15507	59.10	15063	59.28	14619	59.46	14133	59.43	13644	59.39
HDBI-330	1750	SQBI	1/2	8235	31.96										
	1750	SQBI	3/4	12352	47.95										
	1750	SQBI	FULL	16470	63.93										
HDBI-360	1750	SQBI	1/2	16331	60.33	15064	59.99	13619	59.67	11878	55.24				
	1750	SQBI	3/4	24497	90.49	22597	89.99	20429	89.50	17817	82.87				

Performance certified is for installation type B-Free inlet, ducted outlet.

Performance ratings do not include the effects of appurtenances (accessories).

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

See additional HDBI-330 and
HDBI-360 ratings at bottom of page

[illegible]

Belt Drive Ratings Table — at 70°F | .075 density | sea level

12

HDBI-120

Wheel

Diameter - 12.25"

Outlet OD

Size - 9.375" x 13.75"

Area - .895 ft² ID

Inlet OD

Size - 13.25"

Area - .92 ft² ID

All wheels are HDBI Type

Class II = light text face above Class III

Class III = bold text face

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
600	670	603	0.01	831	0.04	1011	0.08	1173	0.12	1324	0.16	1598	0.26		
750	838	753	0.02	948	0.06	1105	0.10	1247	0.14	1380	0.19	1625	0.29	1852	0.41
900	1005	904	0.04	1073	0.09	1214	0.13	1341	0.18	1460	0.23	1681	0.34	1887	0.47
1050	1173	1055	0.07	1204	0.12	1332	0.17	1447	0.22	1556	0.28	1757	0.40	1946	0.53
1200	1341	1205	0.10	1339	0.16	1456	0.21	1562	0.28	1662	0.34	1848	0.47	2022	0.61
1350	1508	1356	0.15	1477	0.21	1584	0.27	1683	0.34	1776	0.41	1949	0.55	2112	0.70
1500	1676	1507	0.20	1617	0.27	1716	0.34	1809	0.41	1896	0.49	2058	0.64	2210	0.81
1650	1843	1657	0.27	1758	0.34	1851	0.42	1938	0.50	2019	0.58	2173	0.75	2316	0.92
1800	2011	1808	0.35	1901	0.42	1988	0.51	2069	0.59	2146	0.68	2292	0.86	2428	1.05
1950	2178	1959	0.44	2045	0.52	2126	0.61	2203	0.71	2276	0.80	2414	0.99	2544	1.19
2100	2346	2109	0.55	2190	0.64	2266	0.73	2339	0.83	2408	0.93	2540	1.14	2664	1.35
2250	2513	2260	0.67	2336	0.77	2408	0.87	2476	0.98	2542	1.08	2668	1.30	2786	1.53
2400	2681	2411	0.82	2482	0.92	2550	1.03	2615	1.14	2678	1.25	2798	1.48	2912	1.72
2550	2849	2561	0.98	2629	1.09	2693	1.21	2755	1.32	2815	1.44	2930	1.68	3039	1.93
2700	3016	2712	1.17	2776	1.28	2837	1.40	2896	1.52	2954	1.65	3064	1.90	3169	2.17
2850	3184	2863	1.37	2923	1.49	2981	1.62	3038	1.75	3093	1.88	3199	2.15	3300	2.42
3000	3351	3013	1.60	3071	1.73	3126	1.86	3181	1.99	3233	2.13	3335	2.41	3433	2.70
3150	3519	3164	1.85	3219	1.99	3272	2.12	3324	2.26	3375	2.41	3473	2.70	3567	3.00
3300	3686	3315	2.13	3367	2.27	3418	2.41	3468	2.56	3517	2.71	3611	3.01	3702	3.32
3450	3854	3465	2.43	3515	2.58	3564	2.73	3612	2.88	3659	3.04	3750	3.35	3838	3.68
3600	4022	3616	2.76	3664	2.92	3711	3.07	3757	3.23	3802	3.39	3890	3.72	3976	4.06
3750	4189	3767	3.12	3813	3.28	3858	3.45	3903	3.61	3946	3.78	4031	4.12	4114	4.47
3900	4357	3917	3.51	3962	3.68	4005	3.85	4048	4.02	4090	4.19	4173	4.55	4253	4.90

Volume CFM	O.V. fpm	2 ½" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1050	1173	2125	0.68	2296	0.83	2617	1.16	2915	1.52						
1200	1341	2188	0.76	2347	0.92	2648	1.26	2930	1.64	3196	2.04	3448	2.48		
1350	1508	2266	0.86	2414	1.03	2696	1.39	2962	1.77	3216	2.19	3457	2.63	3688	3.10
1500	1676	2355	0.98	2494	1.15	2759	1.53	3011	1.93	3251	2.36	3481	2.81	3703	3.29
1650	1843	2453	1.10	2584	1.29	2834	1.68	3072	2.10	3300	2.54	3520	3.01	3732	3.50
1800	2011	2557	1.24	2682	1.44	2919	1.85	3145	2.29	3362	2.75	3572	3.23	3774	3.74
1950	2178	2667	1.40	2786	1.61	3012	2.04	3227	2.50	3434	2.98	3634	3.47	3828	3.99
2100	2346	2782	1.57	2895	1.79	3111	2.25	3317	2.72	3515	3.22	3706	3.74	3892	4.27
2250	2513	2899	1.76	3008	1.99	3216	2.47	3413	2.97	3603	3.49	3786	4.02	3965	4.58
2400	2681	3020	1.96	3125	2.21	3324	2.71	3514	3.23	3697	3.77	3873	4.33	4045	4.90
2550	2849	3144	2.19	3244	2.44	3437	2.97	3620	3.52	3796	4.08	3966	4.66	4131	5.25
2700	3016	3269	2.43	3367	2.70	3552	3.26	3729	3.83	3899	4.41	4063	5.01	4223	5.63
2850	3184	3397	2.70	3491	2.98	3671	3.56	3842	4.15	4006	4.76	4165	5.39	4320	6.02
3000	3351	3527	2.99	3617	3.28	3791	3.89	3957	4.51	4116	5.14	4271	5.78	4421	6.44
3150	3519	3657	3.30	3745	3.61	3914	4.24	4075	4.88	4230	5.54	4379	6.21	4525	6.89
3300	3686	3790	3.64	3875	3.96	4039	4.61	4195	5.28	4345	5.96	4491	6.66	4632	7.36
3450	3854	3923	4.01	4006	4.34	4165	5.02	4317	5.71	4463	6.42	4605	7.13	4743	7.86
3600	4022	4058	4.40	4138	4.74	4293	5.45	4441	6.16	4583	6.89	4721	7.64	4856	8.39
3750	4189	4194	4.82	4272	5.18	4422	5.91	4566	6.65	4705	7.40	4840	8.17	4971	8.95
3900	4357	4330	5.27	4406	5.64	4552	6.39	4693	7.16	4828	7.94	4960	8.73		
4050	4524	4468	5.75	4542	6.14	4684	6.91	4821	7.71	4953	8.51				
4200	4692	4606	6.27	4678	6.66	4817	7.46	4950	8.28						

Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1800	2011	3971	4.26	4163	4.81	4349	5.38	4530	5.97	4707	6.59	4880	7.22
1950	2178	4017	4.54	4201	5.10	4380	5.68	4555	6.28	4727	6.90	4894	7.54
2100	2346	4073	4.83	4250	5.41	4423	6.00	4591	6.62	4757	7.25	4919	7.90
2250	2513	4139	5.15	4308	5.74	4475	6.35	4638	6.98	4798	7.62	4954	8.29
2400	2681	4212	5.49	4376	6.10	4536	6.73	4693	7.37	4848	8.03		
2550	2849	4292	5.86	4450	6.49	4605	7.13	4757	7.79	4906	8.46		
2700	3016	4379	6.25	4531	6.90	4681	7.56	4828	8.24	4972	8.93		
2850	3184	4471	6.67	4618	7.34	4763	8.02	4905	8.71				
3000	3351	4567	7.12	4710	7.80	4850	8.50						
3150	3519	4667	7.58	4806	8.29	4942	9.01						
3300	3686	4770	8.08	4906	8.81								
3450	3854	4877	8.60										

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

HDBI-130**Wheel**

Diameter - 13.50"

Outlet OD

Size - 10.38" x 15.19"

Area - 1.05 ft² ID**Inlet OD**

Size - 14.63"

Area - 1.14 ft² ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

Class III = bold text face*Class IV = italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP		2 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
900	857	672	0.03	867	0.08	1027	0.13	1167	0.18	1290	0.24	1500	0.37	1706	0.51	1892	0.67
1100	1047	821	0.06	986	0.11	1129	0.17	1257	0.23	1372	0.30	1579	0.44	1756	0.60	1921	0.76
1300	1238	971	0.10	1111	0.16	1242	0.22	1356	0.29	1465	0.37	1661	0.52	1835	0.69	1990	0.87
1500	1428	1120	0.15	1241	0.22	1361	0.29	1468	0.37	1565	0.45	1751	0.62	1918	0.81	2071	1.00
1700	1619	1269	0.21	1378	0.29	1484	0.37	1583	0.46	1677	0.55	1847	0.73	2007	0.93	2153	1.14
1900	1809	1419	0.30	1518	0.39	1611	0.48	1705	0.57	1792	0.67	1952	0.87	2102	1.08	2243	1.30
2100	2000	1568	0.40	1658	0.50	1741	0.60	1829	0.70	1911	0.81	2064	1.02	2202	1.25	2339	1.49
2300	2190	1717	0.53	1801	0.64	1877	0.74	1956	0.85	2034	0.97	2179	1.20	2313	1.44	2436	1.69
2500	2380	1866	0.68	1944	0.79	2016	0.91	2084	1.03	2159	1.15	2297	1.40	2426	1.66	2546	1.93
2700	2571	2016	0.86	2088	0.98	2155	1.10	2219	1.23	2286	1.36	2419	1.63	2541	1.91	2658	2.19
2900	2761	2165	1.06	2232	1.20	2296	1.33	2356	1.46	2415	1.60	2543	1.89	2660	2.18	2772	2.48
3100	2952	2314	1.30	2378	1.44	2438	1.58	2495	1.72	2550	1.87	2669	2.17	2782	2.48	2889	2.80
3300	3142	2464	1.57	2523	1.72	2580	1.87	2635	2.02	2687	2.17	2796	2.49	2906	2.82	3009	3.15
3500	3333	2613	1.87	2669	2.03	2723	2.19	2775	2.35	2826	2.51	2925	2.84	3031	3.19	3132	3.54
3700	3523	2762	2.21	2816	2.38	2867	2.54	2917	2.71	2965	2.89	3057	3.23	3158	3.59	3255	3.96
3900	3714	2912	2.59	2962	2.76	3012	2.94	3059	3.12	3105	3.30	3194	3.66	3286	4.04	3381	4.42
4100	3904	3061	3.01	3109	3.19	3156	3.38	3202	3.56	3246	3.75	3332	4.13	3415	4.52	3507	4.92
4300	4095	3210	3.47	3257	3.66	3301	3.86	3345	4.05	3388	4.25	3470	4.65	3549	5.05	3635	5.47
4500	4285	3360	3.98	3404	4.18	3447	4.38	3489	4.59	3530	4.79	3609	5.21	3686	5.63	3764	6.06
4700	4476	3509	4.53	3551	4.74	3593	4.95	3633	5.17	3673	5.38	3749	5.82	3823	6.25	3895	6.69

Volume CFM	O.V. fpm	3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1500	1428	2211	1.20	2461	1.63	2708	2.10	2946	2.60	3165	3.12	3368	3.65	3560	4.21	3741	4.79
1700	1619	2292	1.36	2540	1.82	2760	2.31	2975	2.83	3193	3.38	3397	3.95	3588	4.54	3769	5.15
1900	1809	2375	1.54	2620	2.03	2839	2.54	3039	3.08	3223	3.65	3426	4.25	3617	4.88	3798	5.52
2100	2000	2466	1.73	2703	2.25	2920	2.80	3118	3.37	3301	3.96	3472	4.58	3646	5.22	3827	5.90
2300	2190	2562	1.95	2789	2.50	3002	3.08	3198	3.68	3380	4.30	3550	4.95	3711	5.61	3863	6.29
2500	2380	2659	2.20	2883	2.78	3086	3.38	3281	4.01	3461	4.67	3630	5.34	3790	6.03	3941	6.75
2700	2571	2767	2.48	2979	3.08	3178	3.71	3364	4.37	3543	5.06	3711	5.76	3870	6.49	4021	7.23
2900	2761	2879	2.78	3077	3.41	3274	4.07	3454	4.76	3627	5.47	3793	6.21	3951	6.96	4101	7.74
3100	2952	2993	3.12	3186	3.78	3370	4.46	3549	5.18	3716	5.92	3877	6.68	4034	7.47	4183	8.27
3300	3142	3108	3.49	3297	4.18	3471	4.89	3645	5.64	3811	6.41	3966	7.20	4117	8.01	4265	8.84
3500	3333	3227	3.89	3410	4.62	3581	5.36	3743	6.13	3906	6.93	4060	7.75	4207	8.59	4349	9.44
3700	3523	3348	4.33	3525	5.09	3692	5.87	3849	6.66	4004	7.49	4156	8.34	4301	9.21	4439	10.09
3900	3714	3471	4.81	3641	5.60	3806	6.42	3959	7.24	4104	8.08	4253	8.97	4396	9.87	4533	10.79
4100	3904	3595	5.33	3761	6.16	3920	7.00	4071	7.86	4214	8.74	4351	9.63	4493	10.57	4629	11.52
4300	4095	3721	5.89	3883	6.76	4036	7.63	4185	8.53	4325	9.44	4459	10.36	4591	11.31	4726	12.29
4500	4285	3847	6.50	4006	7.40	4155	8.31	4299	9.24	4438	10.18	4570	11.14	4696	12.11	<i>4823</i>	<i>13.11</i>
4700	4476	3975	7.15	4130	8.09	4276	9.03	4415	9.99	4552	10.97	4682	11.96	<i>4806</i>	<i>12.96</i>	<i>4926</i>	<i>13.98</i>
4900	4666	4104	7.86	4255	8.82	4398	9.80	4534	10.80	4667	11.81	<i>4795</i>	<i>12.83</i>	<i>4918</i>	<i>13.87</i>		
5100	4857	4234	8.61	4382	9.61	4522	0.63	4654	11.66	<i>4783</i>	<i>12.70</i>	<i>4909</i>	<i>13.76</i>				

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1900	1809	3970	6.18	4134	6.85	4292	7.54	4444	8.25	4590	8.97	4732	9.70		
2100	2000	3999	6.59	4163	7.30	4320	8.02	4472	8.76	4619	9.51	4760	10.28	<i>4898</i>	<i>11.06</i>
2300	2190	4027	7.01	4192	7.75	4349	8.51	4501	9.28	4647	10.06	4789	10.86	<i>4926</i>	<i>11.67</i>
2500	2380	4086	7.47	4224	8.22	4378	9.00	4530	9.81	4676	10.63	<i>4818</i>	<i>11.46</i>	<i>4955</i>	<i>12.30</i>
2700	2571	4164	7.99	4302	8.76	4435	9.55	4563	10.36	4705	11.20	<i>4847</i>	<i>12.07</i>	<i>4984</i>	<i>12.95</i>
2900	2761	4244	8.53	4381	9.33	4513	10.15	4641	10.99	<i>4764</i>	<i>11.84</i>	<i>4883</i>	<i>12.70</i>		
3100	2952	4325	9.09	4461	9.93	4593	10.78	4719	11.65	<i>4842</i>	<i>12.53</i>	<i>4961</i>	<i>13.42</i>		
3300	3142	4407	9.70	4543	10.56	4673	11.44	<i>4799</i>	<i>12.34</i>	<i>4921</i>	<i>13.25</i>				
3500	3333	4490	10.33	4625	11.23	<i>4755</i>	<i>12.14</i>	<i>4880</i>	<i>13.07</i>						
3700	3523	4574	11.00	4708	11.93	<i>4837</i>	<i>12.87</i>	<i>4962</i>	<i>13.83</i>						
3900	3714	4665	11.72	<i>4792</i>	<i>12.66</i>	<i>4921</i>	<i>13.64</i>								
4100	3904	<i>4759</i>	<i>12.48</i>	<i>4885</i>	<i>13.46</i>										

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

Belt Drive Ratings Table — at 70°F | .075 density | sea level

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HDBI-150

Wheel

Diameter - 15.00"

Outlet OD

Size - 11.38" x 16.75"

Area - 1.28 ft² ID

Inlet OD

Size - 16.13"

Area - 1.39 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP		2 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1750	1367	959	0.14	1062	0.21	1165	0.29	1258	0.37	1341	0.45	1502	0.63	1651	0.83	1789	1.04
2000	1562	1096	0.20	1188	0.29	1278	0.37	1364	0.46	1444	0.56	1585	0.75	1728	0.96	1858	1.18
2250	1757	1233	0.29	1316	0.38	1394	0.48	1475	0.58	1550	0.68	1686	0.89	1809	1.12	1936	1.35
2500	1953	1370	0.40	1446	0.50	1514	0.61	1589	0.72	1659	0.83	1789	1.06	1907	1.30	2017	1.55
2750	2148	1507	0.53	1576	0.64	1640	0.76	1705	0.88	1772	1.00	1895	1.25	2009	1.50	2114	1.77
3000	2343	1644	0.68	1708	0.81	1768	0.93	1824	1.07	1887	1.20	2005	1.46	2114	1.74	2216	2.02
3250	2539	1781	0.87	1840	1.00	1896	1.14	1949	1.28	2003	1.42	2117	1.71	2221	2.00	2320	2.30
3500	2734	1918	1.09	1973	1.23	2026	1.38	2076	1.53	2124	1.68	2230	1.98	2331	2.30	2425	2.61
3750	2929	2055	1.33	2107	1.49	2156	1.65	2204	1.81	2249	1.97	2346	2.29	2443	2.62	2534	2.96
4000	3125	2192	1.62	2241	1.78	2288	1.95	2333	2.12	2376	2.29	2463	2.64	2557	2.99	2645	3.35
4250	3320	2329	1.94	2375	2.12	2419	2.29	2462	2.47	2504	2.66	2583	3.02	2672	3.39	2757	3.77
4500	3515	2466	2.31	2510	2.49	2552	2.68	2593	2.87	2632	3.06	2708	3.45	2788	3.84	2871	4.23
4750	3710	2603	2.71	2644	2.91	2685	3.10	2724	3.30	2761	3.50	2834	3.91	2906	4.33	2986	4.74
5000	3906	2740	3.16	2779	3.37	2818	3.58	2855	3.79	2891	4.00	2962	4.42	3029	4.86	3103	5.29
5250	4101	2877	3.66	2915	3.88	2951	4.09	2987	4.31	3022	4.53	3089	4.98	3154	5.44	3220	5.89
5500	4296	3014	4.21	3050	4.44	3085	4.66	3119	4.89	3153	5.12	3218	5.59	3281	6.06	3341	6.54
5750	4492	3151	4.81	3185	5.05	3219	5.28	3252	5.52	3284	5.76	3347	6.25	3408	6.74	3466	7.24
6000	4687	3288	5.47	3321	5.71	3353	5.96	3385	6.21	3416	6.46	3477	6.97	3535	7.48	3592	8.00
6250	4882	3425	6.18	3457	6.43	3488	6.69	3518	6.95	3548	7.21	3607	7.74	3664	8.27	3719	8.81
6500	5078	3562	6.95	3593	7.21	3623	7.48	3652	7.75	3681	8.02	3738	8.57	3793	9.12	3846	9.68

Volume CFM	O.V. fpm	3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1750	1367	1917	1.26	2175	1.77	2403	2.33										
2000	1562	1982	1.42	2210	1.92	2438	2.51	2644	3.14								
2250	1757	2053	1.60	2273	2.13	2473	2.70	2679	3.35	2868	4.04	3045	4.76				
2500	1953	2132	1.81	2342	2.36	2536	2.96	2714	3.58	2903	4.30	3079	5.05	3245	5.83	3402	6.63
2750	2148	2213	2.05	2418	2.63	2606	3.25	2782	3.90	2944	4.58	3115	5.34	3280	6.15	3437	6.99
3000	2343	2310	2.31	2499	2.93	2680	3.57	2851	4.25	3013	4.96	3164	5.70	3315	6.49	3472	7.36
3250	2539	2412	2.61	2582	3.25	2760	3.93	2924	4.63	3083	5.37	3233	6.14	3374	6.93	3509	7.75
3500	2734	2516	2.94	2682	3.62	2841	4.32	3004	5.06	3155	5.81	3303	6.61	3443	7.44	3577	8.28
3750	2929	2621	3.31	2784	4.02	2934	4.75	3085	5.52	3235	6.31	3376	7.12	3514	7.97	3647	8.85
4000	3125	2728	3.71	2888	4.45	3034	5.22	3171	6.01	3315	6.84	3455	7.69	3588	8.55	3717	9.45
4250	3320	2838	4.15	2993	4.93	3136	5.73	3270	6.56	3397	7.41	3536	8.29	3667	9.19	3792	10.11
4500	3515	2950	4.63	3099	5.45	3240	6.29	3372	7.15	3496	8.03	3618	8.93	3748	9.87	3872	10.83
4750	3710	3063	5.16	3208	6.01	3345	6.89	3475	7.78	3597	8.70	3713	9.63	3829	10.59	3953	11.58
5000	3906	3177	5.73	3319	6.62	3452	7.53	3579	8.46	3699	9.41	3814	10.38	3923	11.37	4034	12.38
5250	4101	3293	6.35	3431	7.28	3560	8.22	3684	9.19	3803	10.18	3916	11.18	4024	12.21	4127	13.24
5500	4296	3409	7.02	3544	7.99	3670	8.97	3791	9.97	3907	10.99	4018	12.04	4125	13.09	4228	14.17
5750	4492	3527	7.74	3658	8.75	3782	9.77	3899	10.80	4013	11.86	4123	12.94	4228	14.03	4329	15.14
6000	4687	3648	8.52	3774	9.56	3894	10.62	4009	11.69	4120	12.79	4228	13.90	4331	15.03	4431	16.18
6250	4882	3773	9.35	3890	10.44	4008	11.53	4121	12.65	4229	13.77	4334	14.92	4436	16.09	4535	17.27
6500	5078	3899	10.24	4007	11.37	4123	12.51	4233	13.66	4339	14.82	4441	16.00	4542	17.20	4639	18.42

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3000	2343	3621	8.25	3763	9.17	3899	10.11	4031	11.07								
3250	2539	3656	8.66	3798	9.61	3934	10.58	4066	11.57	4192	12.58	4315	13.62	<i>4434</i>	<i>14.68</i>		
3500	2734	3705	9.15	3833	10.06	3970	11.06	4101	12.08	4227	13.13	4350	14.19	<i>4469</i>	<i>15.28</i>	<i>4584</i>	<i>16.39</i>
3750	2929	3774	9.75	3896	10.67	4013	11.60	4136	12.61	4263	13.69	<i>4385</i>	<i>14.78</i>	<i>4504</i>	<i>15.90</i>	<i>4619</i>	<i>17.04</i>
4000	3125	3843	10.39	3965	11.34	4081	12.30	4194	13.29	4303	14.29	<i>4420</i>	<i>15.39</i>	<i>4539</i>	<i>16.53</i>	<i>4654</i>	<i>17.70</i>
4250	3320	3914	11.05	4035	12.04	4151	13.04	4263	14.06	<i>4371</i>	<i>15.10</i>	<i>4476</i>	<i>16.15</i>	<i>4579</i>	<i>17.21</i>	<i>4690</i>	<i>18.38</i>
4500	3515	3991	11.80	4105	12.78	4221	13.82	4332	14.87	<i>4440</i>	<i>15.94</i>	<i>4545</i>	<i>17.02</i>	<i>4647</i>	<i>18.12</i>		
4750	3710	4071	12.59	4184	13.61	4294	14.64	<i>4403</i>	<i>15.72</i>	<i>4510</i>	<i>16.82</i>	<i>4615</i>	<i>17.94</i>				
5000	3906	4151	13.43	4264	14.48	<i>4373</i>	<i>15.55</i>	<i>4478</i>	<i>16.64</i>	<i>4581</i>	<i>17.74</i>	<i>4685</i>	<i>18.89</i>				
5250	4101	4233	14.31	4345	15.40	<i>4453</i>	<i>16.51</i>	<i>4558</i>	<i>17.63</i>	<i>4659</i>	<i>18.76</i>						
5500	4296	4326	15.25	<i>4427</i>	<i>16.37</i>	<i>4534</i>	<i>17.51</i>	<i>4638</i>	<i>18.67</i>								
5750	4492	<i>4426</i>	<i>16.27</i>	<i>4521</i>	<i>17.40</i>	<i>4616</i>	<i>18.56</i>										
6000	4684	<i>4528</i>	<i>17.33</i>	<i>4621</i>	<i>18.51</i>	<i>4712</i>	<i>19.70</i>										

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

Belt Drive Ratings Table — at 70°F | .075 density | sea level

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HDBI-160

Wheel

Diameter - 16.50"

Outlet OD

Size - 12.50" x 18.36"

Area - 1.54 ft² ID

Inlet OD

Size - 18.00"

Area - 1.73 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		4" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2100	1363	865	0.16	1054	0.34	1214	0.54	1361	0.76	1498	0.99	1622	1.24	1740	1.51	1975	2.14
2400	1558	988	0.24	1155	0.44	1306	0.66	1435	0.90	1566	1.15	1685	1.42	1798	1.70	2007	2.31
2700	1753	1112	0.34	1259	0.57	1401	0.81	1526	1.07	1639	1.34	1755	1.62	1861	1.92	2061	2.55
3000	1948	1235	0.47	1367	0.72	1500	0.99	1619	1.26	1726	1.55	1828	1.85	1932	2.17	2124	2.83
3300	2142	1359	0.62	1481	0.90	1601	1.19	1714	1.49	1818	1.80	1913	2.12	2005	2.45	2192	3.15
3600	2337	1482	0.81	1596	1.11	1705	1.42	1812	1.74	1912	2.07	2005	2.41	2091	2.77	2264	3.50
3900	2532	1606	1.03	1711	1.35	1810	1.69	1913	2.03	2008	2.38	2098	2.75	2183	3.12	2338	3.89
4200	2727	1729	1.28	1828	1.63	1918	1.99	2016	2.36	2107	2.73	2194	3.12	2276	3.51	2428	4.32
4500	2922	1853	1.58	1946	1.95	2031	2.34	2120	2.73	2208	3.12	2291	3.53	2371	3.94	2519	4.80
4800	3116	1976	1.91	2064	2.31	2145	2.72	2225	3.14	2310	3.56	2391	3.98	2467	4.42	2613	5.32
5100	3311	2100	2.29	2183	2.72	2260	3.15	2332	3.59	2414	4.04	2492	4.49	2566	4.94	2707	5.88
5400	3506	2223	2.72	2302	3.17	2376	3.63	2445	4.09	2519	4.56	2595	5.03	2667	5.51	2803	6.49
5700	3701	2347	3.20	2422	3.67	2492	4.15	2559	4.64	2625	5.14	2698	5.64	2768	6.14	2900	7.16
6000	3896	2471	3.73	2542	4.23	2609	4.73	2673	5.25	2735	5.77	2803	6.29	2871	6.81	3000	7.88
6300	4090	2594	4.32	2662	4.84	2727	5.37	2788	5.91	2848	6.45	2909	7.00	2975	7.55	3101	8.66
6600	4285	2718	4.97	2783	5.51	2845	6.07	2904	6.63	2962	7.19	3017	7.77	3080	8.34	3203	9.50
6900	4480	2841	5.68	2903	6.25	2963	6.82	3021	7.41	3076	8.00	3130	8.60	3186	9.20	3306	10.40
7200	4675	2965	6.45	3024	7.04	3082	7.64	3137	8.25	3191	8.87	3243	9.19	3294	10.12	3410	11.37
7500	4870	3088	7.29	3146	7.91	3201	8.53	3255	9.17	3307	9.80	3357	10.45	3406	11.10	3514	12.41

Volume CFM	O.V. fpm	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2100	1363	2183	2.81														
2400	1558	2214	3.02	2401	3.78												
2700	1753	2246	3.25	2433	4.04	2605	4.87	2765	5.73								
3000	1948	2301	3.55	2465	4.31	2637	5.17	2797	6.08	2947	7.02	3090	7.99				
3300	2142	2363	3.89	2523	4.68	2671	5.50	2828	6.43	2979	7.41	3121	8.42	3257	9.45	3386	10.52
3600	2337	2429	4.28	2586	5.10	2733	5.96	2870	6.85	3011	7.81	3153	8.86	3288	9.93	3418	11.04
3900	2532	2501	4.71	2651	5.55	2795	6.44	2932	7.37	3061	8.33	3185	9.31	3320	10.42	3449	11.56
4200	2727	2574	5.17	2722	6.06	2860	6.97	2995	7.93	3123	8.93	3245	9.95	3361	10.99	3481	12.11
4500	2922	2656	5.68	2795	6.60	2932	7.56	3060	8.54	3186	9.56	3307	10.62	3423	11.71	3534	12.81
4800	3116	2746	6.24	2870	7.19	3004	8.19	3132	9.21	3252	10.25	3371	11.34	3486	12.46	3596	13.61
5100	3311	2838	6.85	2960	7.84	3078	8.86	3204	9.93	3324	11.01	3438	12.12	3549	13.26	3659	14.45
5400	3506	2931	7.51	3052	8.54	3165	9.60	3278	10.69	3396	11.82	3509	12.97	3618	14.13	3723	15.33
5700	3701	3026	8.21	3144	9.29	3256	10.40	3361	11.52	3470	12.68	3582	13.87	3689	15.08	3793	16.31
6000	3896	3122	8.98	3238	10.10	3347	11.24	3452	12.41	3552	13.60	3655	14.82	3762	16.07	3865	17.35
6300	4090	3219	9.80	3333	10.96	3441	12.15	3543	13.36	3642	14.59	3737	15.84	3835	17.12	3937	18.44
6600	4285	3318	10.68	3429	11.89	3535	13.12	3636	14.37	3733	15.64	3827	16.93	3917	18.24	<i>4011</i>	<i>19.59</i>
6900	4480	3419	11.63	3525	12.87	3630	14.15	3730	15.45	3826	16.76	3918	18.09	<i>4007</i>	<i>19.45</i>	<i>4093</i>	<i>20.82</i>
7200	4675	3520	12.64	3625	13.93	3726	15.25	3824	16.59	3919	17.94	<i>4010</i>	<i>19.32</i>	<i>4098</i>	<i>20.71</i>	<i>4183</i>	<i>22.13</i>
7500	4870	3622	13.72	3725	15.06	3824	16.41	3920	17.79	<i>4013</i>	<i>19.20</i>	<i>4103</i>	<i>20.62</i>	<i>4190</i>	<i>22.05</i>	<i>4274</i>	<i>23.51</i>

Volume CFM	O.V. fpm	13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		19" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3600	2337	3542	12.17	3661	13.33										
3900	2532	3573	12.73	3693	13.93	3808	15.15	3919	16.40	<i>4027</i>	<i>17.68</i>				
4200	2727	3605	13.31	3724	14.55	3839	15.81	3951	17.09	<i>4059</i>	<i>18.40</i>	<i>4164</i>	<i>19.74</i>	<i>4266</i>	<i>21.09</i>
4500	2922	3640	13.94	3756	15.18	3871	16.47	3982	17.80	<i>4090</i>	<i>19.14</i>	<i>4195</i>	<i>20.51</i>		
4800	3116	3702	14.77	3804	15.96	3904	17.17	<i>4014</i>	<i>18.52</i>	<i>4122</i>	<i>19.90</i>	<i>4227</i>	<i>21.31</i>		
5100	3311	3764	15.65	3866	16.88	<i>3965</i>	<i>18.13</i>	<i>4061</i>	<i>19.39</i>	<i>4154</i>	<i>20.68</i>	<i>4259</i>	<i>22.12</i>		
5400	3506	3828	16.58	3929	17.84	<i>4027</i>	<i>19.13</i>	<i>4123</i>	<i>20.44</i>	<i>4215</i>	<i>21.76</i>				
5700	3701	3892	17.55	<i>3993</i>	<i>18.85</i>	<i>4090</i>	<i>20.18</i>	<i>4185</i>	<i>21.53</i>	<i>4277</i>	<i>22.89</i>				
6000	3896	<i>3964</i>	<i>18.63</i>	<i>4059</i>	<i>19.94</i>	<i>4154</i>	<i>21.28</i>	<i>4248</i>	<i>22.67</i>						
6300	4090	<i>4036</i>	<i>19.77</i>	<i>4131</i>	<i>21.12</i>	<i>4223</i>	<i>22.48</i>								
6600	4285	<i>4109</i>	<i>20.97</i>	<i>4203</i>	<i>22.36</i>										
6900	4480	<i>4182</i>	<i>22.22</i>	<i>4276</i>	<i>23.65</i>										

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

Belt Drive Ratings Table — at 70°F | .075 density | sea level

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HDBI-180

Wheel

Diameter - 18.25"

Outlet OD

Size - 13.88" x 20.38"

Area - 1.90 ft² ID

Inlet OD

Size - 20.00"

Area - 2.13 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = **bold text face**

Class IV = *italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		4" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2800	1473	852	0.28	1010	0.54	1150	0.82	1272	1.12	1392	1.46	1502	1.82	1605	2.18	1804	3.00
3200	1684	974	0.42	1112	0.70	1243	1.02	1356	1.35	1463	1.70	1568	2.09	1667	2.50	1848	3.33
3600	1894	1095	0.60	1217	0.91	1339	1.27	1447	1.62	1545	1.99	1640	2.39	1735	2.83	1910	3.74
4000	2105	1217	0.82	1328	1.16	1439	1.55	1541	1.95	1635	2.35	1722	2.76	1806	3.20	1975	4.19
4400	2315	1339	1.09	1441	1.47	1540	1.88	1638	2.32	1728	2.76	1812	3.20	1890	3.65	2046	4.65
4800	2526	1461	1.42	1556	1.83	1644	2.26	1737	2.73	1823	3.22	1904	3.69	1980	4.17	2120	5.17
5200	2736	1582	1.80	1671	2.25	1751	2.70	1838	3.21	1920	3.73	1998	4.25	2072	4.76	2209	5.81
5600	2947	1704	2.25	1787	2.73	1863	3.22	1941	3.74	2020	4.29	2094	4.86	2166	5.42	2300	6.53
6000	3157	1826	2.77	1903	3.28	1975	3.80	2045	4.34	2121	4.93	2193	5.53	2261	6.14	2392	7.32
6400	3368	1947	3.36	2021	3.90	2089	4.46	2153	5.02	2224	5.63	2294	6.27	2360	6.91	2485	8.19
6800	3578	2069	4.03	2138	4.60	2203	5.19	2265	5.79	2328	6.42	2395	7.08	2459	7.76	2580	9.13
7200	3789	2191	4.78	2256	5.39	2318	6.01	2377	6.64	2434	7.28	2498	7.98	2560	8.69	2678	10.14
7600	4000	2313	5.62	2375	6.27	2434	6.92	2490	7.58	2545	8.25	2602	8.96	2662	9.70	2777	11.22
8000	4210	2434	6.56	2494	7.23	2550	7.92	2604	8.62	2657	9.32	2707	10.03	2766	10.81	2877	12.39
8400	4421	2556	7.59	2613	8.30	2667	9.02	2719	9.75	2769	10.49	2818	11.23	2870	12.01	2978	13.66
8800	4631	2678	8.73	2732	9.47	2784	10.22	2834	10.99	2883	11.75	2930	12.53	2975	13.31	3080	15.03
9200	4842	2800	9.98	2851	10.75	2901	11.54	2950	12.33	2997	13.13	3042	13.94	3086	14.75	3184	16.50

Volume CFM	O.V. fpm	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3200	1684	2022	4.26	2192	5.28	2347	6.36										
3600	1894	2069	4.68	2223	5.69	2378	6.83	2523	8.01	2659	9.23						
4000	2105	2131	5.20	2275	6.23	2410	7.31	2554	8.55	2690	9.83	2819	11.15	2942	12.51	3059	13.91
4400	2315	2196	5.75	2337	6.86	2470	8.00	2594	9.17	2722	10.45	2850	11.82	2973	13.24	3090	14.69
4800	2526	2266	6.32	2402	7.53	2532	8.74	2655	9.97	2772	11.23	2882	12.52	3004	13.99	3121	15.50
5200	2736	2339	6.94	2472	8.20	2597	9.51	2717	10.83	2833	12.15	2943	13.51	3048	14.89	3152	16.33
5600	2947	2422	7.68	2544	8.93	2668	10.30	2783	11.71	2896	13.13	3005	14.55	3109	15.99	3209	17.46
6000	3157	2512	8.53	2623	9.77	2739	11.15	2854	12.62	2963	14.13	3067	15.65	3171	17.16	3271	18.69
6400	3368	2603	9.46	2713	10.76	2816	12.09	2926	13.59	3034	15.15	3136	16.75	3235	18.39	3333	19.99
6800	3578	2695	10.47	2803	11.84	2905	13.23	3001	14.65	3106	16.25	3207	17.91	3305	19.60	3399	21.33
7200	3789	2789	11.57	2895	13.00	2995	14.45	3090	15.93	3180	17.43	3279	19.13	3376	20.88	3469	22.67
7600	4000	2884	12.76	2988	14.25	3086	15.76	3179	17.31	3269	18.87	3355	20.46	3448	22.24	3541	24.08
8000	4210	2982	14.01	3082	15.60	3178	17.18	3270	18.78	3358	20.41	3443	22.05	3525	23.73	3613	25.57
8400	4421	3081	15.34	3177	17.05	3272	18.69	3363	20.36	3449	22.05	3533	23.76	3613	25.49	3691	27.24
8800	4631	3180	16.77	3275	18.55	3367	20.31	3456	22.04	3541	23.79	3623	25.57	3703	27.36	3780	29.17
9200	4842	3281	18.31	3374	20.16	3463	22.03	3550	23.84	3634	25.65	3715	27.49	3794	29.34	3870	31.22

Volume CFM	O.V. fpm	13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		19" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4400	2315	3202	16.19	3310	17.71										
4800	2526	3233	17.05	3341	18.63	3445	20.24	3546	21.89	3644	23.57				
5200	2736	3264	17.93	3372	19.57	3476	21.24	3577	22.94	3674	24.67	3769	26.44	3862	28.23
5600	2947	3306	18.96	3403	20.54	3507	22.26	3608	24.02	3706	25.81	3800	27.63		
6000	3157	3367	20.25	3459	21.84	3548	23.45	3639	25.13	3737	26.98	3832	28.85		
6400	3368	3428	21.62	3520	23.26	3609	24.93	3696	26.62	3780	28.34	3863	30.11		
6800	3578	3491	23.05	3583	24.76	3671	26.49	3757	28.25	3840	30.02				
7200	3789	3559	24.48	3646	26.33	3734	28.13	3819	29.95						
7600	4000	3630	25.96	3716	27.86	3799	29.79	3882	31.73						
8000	4210	3701	27.51	3787	29.47	3870	31.47								
8400	4421	3774	29.14	3859	31.17										
8800	4631	3855	31.01												

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

Belt Drive Ratings Table — at 70°F | .075 density | sea level

17

HDBI-200

Wheel

Diameter - 20.00"

Outlet OD

Size - 15.250" x 22.38"

Area - 2.30 ft² ID

Inlet OD

Size - 22.00"

Area - 2.58 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		4" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4200	1826	971	0.59	1085	0.95	1199	1.32	1299	1.71	1389	2.12	1479	2.56	1566	3.01	1728	3.97
4600	2000	1064	0.78	1169	1.17	1274	1.57	1370	1.99	1457	2.43	1537	2.88	1620	3.36	1775	4.35
5000	2173	1156	1.00	1254	1.42	1350	1.86	1442	2.31	1526	2.77	1604	3.25	1677	3.75	1829	4.80
5400	2347	1249	1.26	1340	1.71	1428	2.18	1516	2.66	1597	3.16	1673	3.67	1744	4.19	1883	5.28
5800	2521	1341	1.56	1427	2.05	1507	2.55	1592	3.06	1670	3.58	1744	4.12	1813	4.67	1941	5.81
6200	2695	1433	1.91	1515	2.43	1588	2.96	1669	3.50	1744	4.05	1815	4.62	1883	5.20	2008	6.40
6600	2869	1526	2.30	1603	2.85	1673	3.42	1746	3.99	1819	4.57	1888	5.17	1954	5.78	2077	7.03
7000	3043	1618	2.75	1691	3.33	1758	3.93	1825	4.53	1896	5.15	1963	5.77	2026	6.41	2146	7.72
7400	3217	1711	3.25	1780	3.86	1844	4.49	1905	5.13	1973	5.77	2038	6.43	2100	7.09	2217	8.46
7800	3391	1803	3.80	1869	4.45	1931	5.11	1989	5.78	2052	6.46	2115	7.14	2175	7.84	2288	9.26
8200	3565	1896	4.42	1959	5.09	2018	5.79	2074	6.49	2131	7.21	2192	7.92	2251	8.64	2361	10.12
8600	3739	1988	5.09	2048	5.80	2105	6.53	2159	7.26	2211	8.01	2270	8.76	2327	9.51	2435	11.05
9000	3913	2081	5.84	2138	6.58	2193	7.34	2245	8.10	2295	8.89	2349	9.67	2405	10.45	2510	12.05
9400	4086	2173	6.65	2229	7.43	2281	8.21	2331	9.01	2380	9.83	2428	10.65	2483	11.46	2586	13.12
9800	4260	2266	7.54	2319	8.34	2370	9.16	2418	10.00	2465	10.84	2511	11.69	2561	12.54	2662	14.26
10200	4434	2358	8.50	2409	9.34	2458	10.19	2505	11.05	2551	11.93	2595	12.81	2641	13.70	2739	15.48
10600	4608	2451	9.54	2500	10.41	2547	11.29	2593	12.19	2637	13.09	2680	14.01	2722	14.94	2817	16.78
11000	4782	2543	10.66	2591	11.56	2637	12.48	2681	13.41	2724	14.34	2765	15.29	2806	16.25	2895	18.16
11400	4956	2636	11.87	2682	12.80	2726	13.75	2769	14.71	2811	15.68	2851	16.65	2891	17.64	2974	19.63

Volume CFM	O.V. fpm	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4200	1826	1874	4.99	2021	6.14	2163	7.39	2295	8.69	2420	10.05						
4600	2000	1921	5.43	2053	6.56	2187	7.81	2319	9.16	2443	10.56	2560	12.01	2672	13.51		
5000	2173	1968	5.91	2099	7.09	2221	8.31	2343	9.64	2467	11.09	2584	12.59	2696	14.13	2803	15.72
5400	2347	2019	6.44	2146	7.65	2267	8.93	2381	10.25	2490	11.63	2608	13.18	2719	14.77	2826	16.41
5800	2521	2073	7.02	2196	8.27	2315	9.59	2427	10.96	2533	12.37	2634	13.82	2743	15.43	2850	17.12
6200	2695	2128	7.64	2250	8.95	2364	10.29	2474	11.71	2580	13.18	2680	14.68	2776	16.21	2874	17.84
6600	2869	2189	8.32	2304	9.68	2417	11.08	2523	12.51	2627	14.03	2727	15.58	2823	17.17	2914	18.79
7000	3043	2257	9.07	2360	10.46	2471	11.92	2577	13.41	2676	14.93	2774	16.53	2869	18.17	2960	19.85
7400	3217	2325	9.87	2427	11.31	2526	12.81	2631	14.36	2729	15.94	2824	17.55	2917	19.23	3007	20.96
7800	3391	2395	10.73	2495	12.23	2588	13.77	2685	15.36	2784	17.00	2877	18.67	2967	20.36	3055	22.12
8200	3565	2465	11.65	2563	13.21	2656	14.80	2744	16.43	2838	18.12	2931	19.84	3020	21.59	3106	23.37
8600	3739	2537	12.63	2633	14.25	2724	15.90	2811	17.58	2894	19.30	2986	21.08	3074	22.89	3159	24.73
9000	3913	2609	13.68	2704	15.36	2794	17.07	2879	18.81	2961	20.58	3041	22.38	3129	24.25	3213	26.15
9400	4086	2682	14.81	2775	16.54	2864	18.31	2948	20.10	3029	21.93	3107	23.78	3184	25.68	3268	27.63
9800	4260	2757	16.01	2847	17.79	2934	19.62	3018	21.47	3098	23.36	3174	25.27	3248	27.21	3323	29.19
10200	4434	2832	17.29	2920	19.13	3006	21.01	3088	22.92	3167	24.86	3243	26.83	3316	28.82	3387	30.85
10600	4608	2908	18.65	2994	20.54	3078	22.48	3159	24.45	3237	26.45	3312	28.47	3384	30.52	3454	32.60
11000	4782	2985	20.09	3070	22.05	3151	24.03	3230	26.06	3307	28.12	3381	30.20	3453	32.31	3523	34.44
11400	4956	3062	21.62	3145	23.64	3225	25.68	3303	27.76	3379	29.87	3452	32.01	3523	34.18	3591	36.37

Volume CFM	O.V. fpm	13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		19" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5400	2347	2928	18.09	3027	19.81	3122	21.57								
5800	2521	2952	18.84	3051	20.61	3146	22.42	3238	24.27	3327	26.15				
6200	2695	2976	19.62	3074	21.43	3169	23.29	3261	25.18	3350	27.11	3437	29.08	3521	31.08
6600	2869	3002	20.44	3098	22.28	3193	24.18	3285	26.12	3374	28.10	3460	30.11	3545	32.16
7000	3043	3048	21.56	3133	23.29	3217	25.09	3309	27.08	3398	29.11	3484	31.17	3568	33.26
7400	3217	3095	22.72	3179	24.51	3260	26.33	3359	28.17	3421	30.14	3508	32.25		
7800	3391	3142	23.93	3226	25.78	3307	27.65	3385	29.55	3462	31.48	3536	33.43		
8200	3565	3189	25.20	3273	27.10	3354	29.03	3432	30.99	3508	32.97				
8600	3739	3241	26.59	3321	28.48	3401	30.47	3479	32.48	3555	34.51				
9000	3913	3295	28.07	3374	30.01	3450	31.98	3527	34.03						
9400	4086	3349	29.61	3427	31.61	3503	33.64								
9800	4260	3404	31.22	3482	33.28	3557	35.37								

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

Belt Drive Ratings Table — at 70°F | .075 density | sea level

18

HDBI-220

Wheel

Diameter - 22.25"

Outlet OD

Size - 16.88" x 20.38"

Area - 2.84 ft² ID

Inlet OD

Size - 24.63"

Area - 3.24 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		4" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4600	1619	765	0.48	870	0.85	962	1.22	1054	1.62	1137	2.04	1214	2.48	1299	2.99	1460	4.10
5200	1830	865	0.70	959	1.11	1042	1.52	1125	1.96	1204	2.41	1277	2.89	1347	3.38	1494	4.52
5800	2042	965	0.97	1051	1.43	1128	1.88	1199	2.35	1275	2.85	1345	3.36	1411	3.89	1534	4.99
6400	2253	1065	1.31	1144	1.80	1215	2.31	1281	2.82	1348	3.35	1415	3.90	1479	4.47	1597	5.64
7000	2464	1164	1.71	1237	2.25	1303	2.82	1366	3.36	1424	3.92	1488	4.51	1549	5.12	1662	6.37
7600	2676	1264	2.19	1332	2.77	1394	3.39	1453	3.98	1509	4.58	1561	5.19	1621	5.84	1732	7.17
8200	2887	1364	2.75	1427	3.38	1486	4.03	1541	4.69	1594	5.33	1645	5.98	1695	6.65	1803	8.06
8800	3098	1464	3.39	1523	4.07	1578	4.77	1630	5.48	1681	6.17	1730	6.86	1776	7.56	1875	9.03
9400	3309	1564	4.14	1619	4.86	1672	5.60	1721	6.36	1769	7.10	1816	7.83	1861	8.58	1949	10.11
10000	3521	1663	4.98	1716	5.75	1766	6.53	1813	7.34	1858	8.15	1903	8.92	1947	9.70	2029	11.30
10600	3732	1763	5.93	1813	6.75	1860	7.57	1906	8.42	1949	9.28	1991	10.12	2033	10.94	2113	12.61
11200	3943	1863	7.00	1910	7.85	1956	8.73	1999	9.62	2040	10.52	2080	11.43	2121	12.29	2198	14.05
11800	4154	1963	8.19	2008	9.09	2051	10.01	2092	10.94	2132	11.88	2171	12.84	2209	13.78	2284	15.61
12400	4366	2063	9.50	2106	10.44	2147	11.41	2187	12.38	2225	13.37	2262	14.37	2298	15.39	2371	17.30
13000	4577	2163	10.94	2204	11.93	2243	12.95	2281	13.96	2318	15.00	2354	16.04	2389	17.10	2459	19.14
13600	4788	2262	12.53	2302	13.57	2340	14.62	2376	15.68	2412	16.76	2447	17.85	2481	18.95	2547	21.12

Volume CFM	O.V. fpm	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4600	1619	1629	5.38	1782	6.74	1922	8.17										
5200	1830	1635	5.78	1785	7.20	1926	8.70	2056	10.27	2179	11.90	2296	13.58				
5800	2042	1669	6.30	1797	7.70	1929	9.24	2060	10.88	2183	12.58	2299	14.34	2410	16.15	2515	18.01
6400	2253	1706	6.87	1831	8.33	1948	9.87	2064	11.49	2186	13.27	2303	15.10	2413	16.98	2519	18.91
7000	2464	1769	7.67	1868	9.02	1983	10.61	2092	12.28	2195	13.99	2306	15.86	2417	17.82	2522	19.83
7600	2676	1833	8.54	1930	9.97	2021	11.43	2127	13.14	2229	14.93	2326	16.76	2420	18.66	2526	20.74
8200	2887	1902	9.51	1994	11.00	2084	12.54	2169	14.12	2264	15.91	2360	17.82	2453	19.78	2541	21.78
8800	3098	1972	10.56	2062	12.13	2148	13.75	2232	15.40	2311	17.09	2395	18.92	2487	20.96	2575	23.03
9400	3309	2044	11.72	2132	13.36	2215	15.05	2296	16.78	2374	18.54	2449	20.34	2522	22.19	2610	24.34
10000	3521	2116	12.97	2203	14.70	2285	16.46	2362	18.26	2438	20.10	2512	21.97	2583	23.87	2652	25.81
10600	3732	2190	14.34	2275	16.15	2356	17.99	2432	19.86	2505	21.77	2576	23.71	2647	25.70	2714	27.70
11200	3943	2271	15.84	2348	17.71	2427	19.63	2503	21.58	2575	23.57	2644	25.58	2711	27.63	2778	29.72
11800	4154	2355	17.48	2422	19.39	2500	21.39	2574	23.42	2645	25.49	2713	27.58	2779	29.70	2843	31.86
12400	4366	2440	19.25	2506	21.24	2574	23.28	2646	25.40	2716	27.54	2784	29.71	2848	31.91	2911	34.14
13000	4577	2526	21.17	2590	23.23	2652	25.33	2720	27.50	2789	29.73	2855	31.98	2919	34.26	2981	36.56
13600	4788	2613	23.23	2675	25.37	2735	27.54	2794	29.75	2862	32.06	2927	34.39	2990	36.75	3051	39.13

Volume CFM	O.V. fpm	13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		19" SP		20" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
6400	2253	2620	20.90	2718	22.93	2812	25.01										
7000	2464	2624	21.88	2721	23.99	2815	26.14	2906	28.33	2994	30.57	3080	32.85				
7600	2676	2627	22.88	2725	25.05	2819	27.28	2910	29.55	2998	31.86	3084	34.21	3167	36.60	3248	39.03
8200	2887	2631	23.87	2728	26.13	2822	28.42	2913	30.76	3001	33.15	3087	35.57	3170	38.04	3251	40.54
8800	3098	2660	25.15	2741	27.31	2826	29.57	2917	31.99	3005	34.45	3091	36.94	3174	39.48	3255	42.06
9400	3309	2694	26.53	2775	28.76	2854	31.03	2930	33.34	3008	35.75	3094	38.32	3177	40.93	3258	43.59
10000	3521	2729	27.97	2810	30.28	2888	32.62	2964	35.00	3038	37.42	3109	39.88	3181	42.39	3262	45.12
10600	3732	2780	29.74	2845	31.85	2923	34.27	2999	36.72	3072	39.22	3144	41.75	3213	44.31	3281	46.90
11200	3943	2843	31.83	2906	33.98	2967	36.14	3034	38.51	3107	41.08	3178	43.68	3248	46.32	3315	48.99
11800	4154	2907	34.05	2969	36.27	3029	38.51	3088	40.78	3145	43.07	3213	45.68	3282	48.39	3350	51.14
12400	4366	2972	36.40	3033	38.69	3093	41.01	3151	43.36	3208	45.73	3263	48.12	3318	50.54	3385	53.36
13000	4577	3041	38.90	3099	41.25	3157	43.65	3215	46.07	3271	48.51	3326	50.98	3380	53.48	3433	55.99
13600	4788	3110	41.54	3168	43.98	3224	46.44	3280	48.92	3335	51.45	3390	53.99	3443	56.56		

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

Belt Drive Ratings Table — at 70°F | .075 density | sea level

19

HDBI-240

Wheel

Diameter - 24.50"

Outlet OD

Size - 18.56" x 27.38"

Area - 3.45 ft² ID

Inlet OD

Size - 27.00"

Area - 3.90 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = **bold text face**

Class IV = *italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP		2 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5000	1449	623	0.42	678	0.62	727	0.82	772	1.02	821	1.23	908	1.68	987	2.16	1073	2.71
5800	1681	723	0.66	771	0.89	814	1.12	856	1.34	894	1.58	977	2.08	1051	2.60	1120	3.15
6600	1913	822	0.97	865	1.23	905	1.49	942	1.75	978	2.01	1049	2.56	1120	3.13	1184	3.73
7400	2144	922	1.37	961	1.66	997	1.95	1030	2.25	1064	2.54	1125	3.12	1191	3.75	1254	4.40
8200	2376	1022	1.87	1057	2.18	1090	2.51	1121	2.83	1152	3.16	1210	3.80	1264	4.46	1325	5.16
9000	2608	1121	2.47	1154	2.81	1184	3.17	1213	3.52	1241	3.89	1296	4.59	1347	5.30	1398	6.04
9800	2840	1221	3.19	1251	3.56	1279	3.95	1307	4.33	1333	4.73	1384	5.50	1433	6.27	1479	7.05
10600	3072	1321	4.04	1348	4.44	1375	4.85	1400	5.27	1425	5.69	1472	6.55	1519	7.37	1563	8.20
11400	3304	1420	5.02	1446	5.45	1471	5.90	1495	6.34	1518	6.79	1563	7.71	1607	8.61	1649	9.50
12200	3536	1520	6.15	1544	6.62	1568	7.09	1590	7.56	1612	8.04	1655	9.02	1696	10.01	1737	10.95
13000	3768	1620	7.45	1642	7.94	1665	8.44	1686	8.95	1707	9.45	1748	10.49	1786	11.54	1825	12.57
13800	4000	1719	8.91	1741	9.43	1762	9.96	1782	10.50	1802	11.04	1841	12.13	1878	13.23	1914	14.36
14600	4231	1819	10.55	1839	11.10	1859	11.66	1879	12.22	1898	12.79	1935	13.94	1970	15.11	2005	16.29
15400	4463	1919	12.38	1938	12.96	1957	13.55	1975	14.15	1994	14.74	2029	15.95	2063	17.18	2096	18.41
16200	4695	2019	14.41	2037	15.02	2055	15.64	2072	16.26	2090	16.89	2124	18.16	2157	19.44	2189	20.75

Volume CFM	O.V. fpm	3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5000	1449	1155	3.32	1317	4.60												
5800	1681	1190	3.75	1335	5.12	1475	6.59	1608	8.13								
6600	1913	1246	4.34	1369	5.70	1497	7.26	1620	8.91	1742	10.62	1855	12.39				
7400	2144	1312	5.06	1422	6.44	1532	7.98	1648	9.72	1754	11.54	1867	13.43	1974	15.36	2074	17.35
8200	2376	1381	5.88	1486	7.36	1584	8.91	1682	10.59	1788	12.51	1888	14.49	1986	16.54	2086	18.64
9000	2608	1453	6.81	1554	8.39	1648	10.03	1736	11.74	1823	13.54	1922	15.62	2015	17.76	2103	19.96
9800	2840	1526	7.85	1625	9.54	1715	11.29	1800	13.09	1882	14.94	1958	16.83	2050	19.06	2138	21.36
10600	3072	1606	9.05	1696	10.83	1785	12.68	1867	14.57	1945	16.52	2021	18.52	2093	20.56	2172	22.82
11400	3304	1690	10.40	1770	12.25	1856	14.20	1936	16.20	2012	18.25	2085	20.35	2156	22.49	2224	24.67
12200	3536	1776	11.90	1850	13.84	1929	15.88	2007	17.99	2082	20.14	2152	22.33	2220	24.57	2288	26.85
13000	3768	1862	13.57	1934	15.62	2002	17.72	2079	19.94	2152	22.19	2222	24.49	2288	26.82	2352	29.20
13800	4000	1950	15.42	2020	17.58	2085	19.77	2153	22.05	2224	24.41	2292	26.82	2357	29.25	2420	31.73
14600	4231	2039	17.46	2106	19.72	2169	22.02	2230	24.37	2297	26.82	2364	29.33	2428	31.87	2490	34.45
15400	4463	2129	19.67	2193	22.06	2255	24.47	2314	26.92	2371	29.41	2436	32.03	2500	34.68	2560	37.37
16200	4695	2220	22.05	2281	24.62	2341	27.13	2398	29.68	2454	32.28	2510	34.94	2572	37.70	2632	40.49

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
8200	2376	2182	20.79	2274	22.99	2361	25.23										
9000	2608	2194	22.23	2286	24.54	2374	26.90	2458	29.29	2539	31.73	2618	34.21				
9800	2840	2221	23.71	2302	26.12	2386	28.59	2470	31.10	2552	33.66	2630	36.25	2707	38.88	2781	41.54
10600	3072	2256	25.28	2336	27.78	2413	30.34	2487	32.95	2564	35.62	2643	38.32	2719	41.07	2793	43.85
11400	3304	2291	26.91	2370	29.52	2447	32.18	2521	34.89	2592	37.65	2661	40.45	2731	43.30	2805	46.19
12200	3536	2352	29.17	2414	31.53	2482	34.10	2555	36.91	2627	39.77	2695	42.66	2762	45.61	2827	48.59
13000	3768	2416	31.62	2477	34.08	2536	36.57	2594	39.10	2661	41.97	2730	44.97	2797	48.01		
13800	4000	2480	34.24	2541	36.80	2599	39.40	2656	42.02	2711	44.68	2765	47.37	2831	50.51		
14600	4231	2549	37.07	2606	39.72	2664	42.41	2720	45.14	2774	47.90	2828	50.69				

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

Belt Drive Ratings Table — at 70°F | .075 density | sea level

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HDBI-270

Wheel

Diameter - 27.00"

Outlet OD

Size - 20.44" x 30.13"

Area - 4.19 ft² ID

Inlet OD

Size - 30.00"

Area - 4.83 ft² ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

Volume CFM	O.V. fpm	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5600	1336	500	0.38	551	0.59	599	0.81	644	1.04	688	1.27	777	1.80		
6400	1527	571	0.57	617	0.81	660	1.06	700	1.31	739	1.57	814	2.11	894	2.73
7200	1718	643	0.82	684	1.08	722	1.36	760	1.63	794	1.92	865	2.51	932	3.14
8000	1909	714	1.12	752	1.41	786	1.72	821	2.02	853	2.33	916	2.98	978	3.64
8800	2100	786	1.49	820	1.81	852	2.14	883	2.48	914	2.82	971	3.51	1029	4.23
9600	2291	857	1.94	889	2.29	919	2.64	947	3.01	975	3.38	1030	4.12	1082	4.90
10400	2482	928	2.46	958	2.84	986	3.23	1012	3.62	1038	4.02	1091	4.82	1139	5.64
11200	2673	1000	3.07	1027	3.48	1054	3.89	1079	4.32	1103	4.75	1152	5.60	1198	6.48
12000	2863	1071	3.78	1097	4.22	1122	4.66	1145	5.11	1168	5.56	1213	6.48	1259	7.41
12800	3054	1143	4.59	1167	5.05	1190	5.52	1213	6.00	1234	6.48	1276	7.47	1320	8.44
13600	3245	1214	5.50	1237	5.99	1259	6.49	1280	7.00	1301	7.51	1341	8.55	1381	9.59
14400	3436	1285	6.53	1307	7.05	1328	7.58	1348	8.11	1368	8.65	1406	9.75	1444	10.85
15200	3627	1357	7.68	1377	8.23	1397	8.79	1417	9.35	1436	9.92	1472	11.06	1507	12.24
16000	3818	1428	8.96	1448	9.54	1467	10.12	1485	10.71	1504	11.31	1539	12.51	1572	13.74
16800	4009	1500	10.38	1518	10.98	1537	11.59	1554	12.21	1572	12.83	1605	14.09	1638	15.37
17600	4200	1571	11.93	1589	12.56	1606	13.20	1623	13.85	1640	14.50	1673	15.81	1704	17.15
18400	4391	1642	13.63	1660	14.28	1676	14.96	1693	15.63	1709	16.31	1740	17.68	1770	19.07
19200	4582	1714	15.49	1730	16.17	1746	16.87	1762	17.58	1778	18.28	1808	19.71	1837	21.15
20000	4773	1785	17.50	1801	18.21	1816	18.95	1832	19.68	1847	20.41	1876	21.89	1904	23.39

Volume CFM	O.V. fpm	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
8000	1909	1039	4.36	1103	5.14										
8800	2100	1085	4.97	1140	5.76	1253	7.50								
9600	2291	1136	5.69	1186	6.49	1290	8.28	1390	10.20						
10400	2482	1187	6.48	1237	7.34	1328	9.12	1427	11.15	1518	13.25				
11200	2673	1242	7.37	1288	8.28	1376	10.15	1464	12.17	1554	14.37	1638	16.64		
12000	2863	1301	8.35	1341	9.32	1427	11.29	1506	13.32	1591	15.58	1674	17.95	1752	20.38
12800	3054	1361	9.44	1400	10.46	1479	12.54	1557	14.67	1629	16.86	1711	19.34	1789	21.87
13600	3245	1421	10.64	1459	11.70	1531	13.89	1607	16.13	1678	18.41	1749	20.82	1826	23.46
14400	3436	1482	11.95	1519	13.07	1588	15.36	1659	17.70	1729	20.09	1795	22.53	1863	25.13
15200	3627	1544	13.39	1580	14.56	1647	16.95	1712	19.40	1780	21.89	1845	24.43	1907	27.02
16000	3818	1606	14.96	1641	16.18	1707	18.67	1769	21.22	1832	23.83	1896	26.47	1957	29.16
16800	4009	1669	16.67	1703	17.95	1767	20.54	1827	23.19	1885	25.90	1948	28.64	2008	31.43
17600	4200	1734	18.50	1765	19.85	1828	22.55	1887	25.30	1943	28.11	2000	30.96	2059	33.86
18400	4391	1800	20.48	1828	21.90	1889	24.71	1947	27.56	2002	30.47	2054	33.43	2111	36.43
19200	4582	1866	22.61	1893	24.09	1951	27.03	2007	29.99	2061	33.00	2112	36.06	2163	39.16
20000	4773	1932	24.91	1959	26.44	2013	29.51	2068	32.57	2121	35.69	2171	38.85	2220	42.06

Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
12800	3054	1862	24.46												
13600	3245	1898	26.15	1967	28.90										
14400	3436	1935	27.93	2004	30.78	2070	33.69								
15200	3627	1973	29.81	2041	32.77	2106	35.77	2169	38.83	2229	41.93				
16000	3818	2015	31.89	2078	34.85	2143	37.97	2206	41.13	2266	44.33	2324	47.58		
16800	4009	2065	34.27	2120	37.14	2181	40.27	2243	43.53	2302	46.84	2360	50.19	2416	53.59
17600	4200	2115	36.79	2170	39.77	2222	42.78	2280	46.05	2339	49.47	2397	52.93	2453	56.42
18400	4391	2167	39.47	2220	42.54	2272	45.66	2322	48.81	2377	52.21	2434	55.78		
19200	4582	2218	42.31	2271	45.48	2322	48.70	2372	51.95	2420	55.24	2472	58.75		
20000	4773	2271	45.31	2323	48.59	2373	51.91	2422	55.26	2470	58.65				

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

HDBI-300**Wheel**

Diameter - 30.00"

Outlet OD

Size - 22.75" x 33.56"

Area - 5.20 ft² ID**Inlet OD**

Size - 33.50"

Area - 6.12 ft² ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

Class III = bold text face*Class IV = italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
8000	1538	521	0.74	561	1.03	599	1.34	635	1.65	670	1.97	737	2.65	808	3.42
9000	1730	586	1.05	622	1.38	656	1.72	690	2.07	721	2.42	783	3.16	842	3.94
10000	1923	651	1.44	684	1.80	715	2.18	745	2.56	775	2.95	830	3.75	886	4.58
11000	2115	716	1.91	747	2.31	775	2.73	802	3.15	830	3.57	881	4.43	933	5.33
12000	2307	781	2.48	809	2.92	836	3.36	861	3.82	886	4.28	935	5.21	981	6.17
13000	2500	846	3.15	872	3.63	897	4.11	921	4.60	943	5.10	990	6.10	1034	7.12
14000	2692	911	3.94	936	4.45	959	4.96	981	5.49	1003	6.03	1046	7.10	1088	8.18
15000	2884	976	4.85	999	5.39	1021	5.94	1042	6.50	1062	7.07	1103	8.22	1143	9.37
16000	3076	1041	5.88	1063	6.46	1084	7.05	1104	7.64	1123	8.25	1160	9.48	1199	10.69
17000	3269	1106	7.05	1127	7.67	1146	8.29	1165	8.92	1184	9.56	1219	10.86	1255	12.16
18000	3461	1171	8.37	1191	9.02	1209	9.68	1227	10.35	1245	11.02	1279	12.38	1312	13.77
19000	3653	1236	9.85	1255	10.53	1272	11.22	1290	11.93	1307	12.63	1339	14.07	1370	15.53
20000	3846	1302	11.49	1319	12.20	1336	12.94	1352	13.67	1368	14.41	1400	15.91	1430	17.44
21000	4038	1367	13.30	1383	14.05	1399	14.82	1415	15.58	1431	16.36	1461	17.93	1490	19.53
22000	4230	1432	15.29	1448	16.07	1463	16.88	1478	17.68	1493	18.49	1522	20.14	1550	21.80
23000	4423	1497	17.47	1512	18.29	1527	19.13	1541	19.97	1556	20.82	1584	22.53	1611	24.26
24000	4615	1562	19.85	1576	20.69	1591	21.58	1605	22.46	1618	23.34	1645	25.12	1672	26.92
25000	4807	1627	22.43	1641	23.33	1655	24.23	1668	25.15	1681	26.07	1707	27.92	1733	29.78

Volume CFM	O.V. fpm	2 ½" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
10000	1923	939	5.46	997	6.44										
11000	2115	982	6.25	1031	7.22	1133	9.38								
12000	2307	1029	7.16	1074	8.17	1166	10.37	1256	12.76						
13000	2500	1076	8.17	1120	9.24	1201	11.45	1290	13.96	1371	16.58				
14000	2692	1127	9.30	1167	10.44	1247	12.77	1324	15.26	1405	18.00	1480	20.82		
15000	2884	1181	10.55	1217	11.75	1293	14.21	1364	16.75	1439	19.52	1513	22.47	1583	25.50
16000	3076	1235	11.93	1270	13.20	1340	15.79	1410	18.45	1475	21.19	1547	24.23	1616	27.39
17000	3269	1290	13.46	1324	14.79	1388	17.51	1456	20.30	1520	23.16	1581	26.10	1650	29.39
18000	3461	1346	15.14	1379	16.53	1441	19.38	1504	22.30	1566	25.28	1625	28.33	1684	31.51
19000	3653	1403	16.97	1435	18.43	1495	21.40	1552	24.45	1613	27.57	1671	30.74	1727	33.97
20000	3846	1460	18.98	1491	20.50	1549	23.60	1605	26.78	1661	30.02	1718	33.32	1772	36.68
21000	4038	1518	21.15	1547	22.75	1604	25.98	1658	29.28	1710	32.65	1765	36.08	1819	39.56
22000	4230	1577	23.49	1604	25.18	1660	28.54	1713	31.97	1763	35.46	1813	39.02	1866	42.64
23000	4423	1637	26.01	1662	27.79	1716	31.29	1767	34.85	1817	38.48	1863	42.16	1913	45.90
24000	4615	1697	28.74	1722	30.58	1772	34.25	1823	37.94	1871	41.69	1917	45.50	1961	49.37
25000	4807	1757	31.68	1781	33.59	1829	37.42	1878	41.24	1925	45.12	1971	49.06	2014	53.05

Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
15000	2884	1693	29.09								
16000	3076	1682	30.61								
17000	3269	1715	32.75	1778	36.17						
18000	3461	1749	35.00	1811	38.55	1870	42.16				
19000	3653	1783	37.37	1845	41.06	1903	44.80	1960	48.60	2014	52.46
20000	3846	1824	40.09	1879	43.70	1937	47.57	1993	51.51	2047	55.49
21000	4038	1870	43.10	1919	46.68	1971	50.48	2027	54.55	<i>2081</i>	<i>58.67</i>
22000	4230	1916	46.30	1965	50.01	2012	53.77	2061	57.74	<i>2115</i>	<i>61.99</i>
23000	4423	1963	49.69	2011	53.53	2057	57.42	<i>2102</i>	<i>61.35</i>	<i>2149</i>	<i>65.46</i>
24000	4615	2010	53.29	2058	57.26	<i>2104</i>	<i>61.27</i>	<i>2148</i>	<i>65.33</i>	<i>2191</i>	<i>69.43</i>
25000	4807	2058	57.11	<i>2105</i>	<i>61.20</i>	<i>2150</i>	<i>65.34</i>	<i>2194</i>	<i>69.53</i>	<i>2237</i>	<i>73.75</i>

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

HDBI-330**Wheel**

Diameter - 33.00"

Outlet OD

Size - 24.88" x 36.88"

Area - 6.20 ft² ID**Inlet OD**

Size - 36.75"

Area - 7.20 ft² ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

Class III = bold text face*Class IV = italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
12000	1935	587	1.69	700	3.51	812	5.67	911	7.94						
13000	2096	636	2.15	742	4.11	843	6.34	943	8.92	1025	11.19				
14000	2258	684	2.69	784	4.79	875	7.06	973	9.78	1057	12.40	1130	14.87		
15000	2419	733	3.31	826	5.56	910	7.91	1004	10.72	1088	13.72	1161	16.33		
16000	2580	782	4.02	869	6.41	951	8.89	1035	11.72	1118	14.86	1192	17.89	1258	20.69
17000	2741	831	4.82	914	7.35	991	9.97	1067	12.81	1149	16.09	1224	19.50	1289	22.51
18000	2903	880	5.72	959	8.39	1033	11.15	1100	14.01	1180	17.40	1254	20.94	1321	24.45
19000	3064	929	6.73	1004	9.54	1074	12.45	1140	15.43	1212	18.79	1284	22.47	1352	26.27
20000	3225	978	7.84	1050	10.80	1117	13.85	1181	16.97	1243	20.28	1315	24.10	1382	28.03
21000	3387	1027	9.08	1096	12.17	1159	15.38	1222	18.62	1279	21.97	1347	25.83	1413	29.90
22000	3548	1076	10.44	1142	13.67	1202	17.03	1263	20.41	1319	23.88	1379	27.66	1444	31.87
23000	3709	1125	11.93	1188	15.30	1246	18.81	1305	22.32	1360	25.92	1411	29.61	1475	33.94
24000	3870	1173	13.56	1235	17.07	1291	20.71	1347	24.38	1400	28.10	1451	31.92	1507	36.14
25000	4032	1222	15.32	1281	18.97	1336	22.75	1389	26.58	1442	30.43	1491	34.38	1539	38.45
26000	4193	1271	17.23	1328	21.03	1381	24.94	1432	28.93	1483	32.92	1532	36.99	1578	41.14
27000	4354	1320	19.30	1375	23.23	1426	27.29	1475	31.44	1525	35.55	1573	39.75	1618	44.03
28000	4516	1369	21.53	1422	25.60	1472	29.79	1519	34.09	1567	38.35	1614	42.68	1658	47.09
29000	4677	1418	23.92	1469	28.13	1518	32.46	1563	36.89	1610	41.32	1655	45.78	1699	50.31
30000	4838	1467	26.48	1517	30.84	1564	35.30	1608	39.87	1652	44.47	1697	49.05	1740	53.72
31000	5000	1516	29.21	1564	33.71	1610	38.32	1653	43.02	1695	47.79	1739	52.51	1781	57.30
32000	5161	1565	32.13	1612	36.77	1656	41.52	1698	46.36	1739	51.28	1782	56.15	1823	61.07
33000	5322	1613	35.24	1659	40.02	1702	44.91	1744	49.88	1783	54.95	1824	59.99	1865	65.04
34000	5483	1662	38.54	1707	43.47	1749	48.49	1789	53.60	1828	58.80	1867	64.02	1907	69.20

Volume CFM	O.V. fpm	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
17000	2741	1350	25.50												
18000	2903	1381	27.58	1438	30.76										
19000	3064	1413	29.79	1469	33.10	1522	36.47								
20000	3225	1445	32.07	1500	35.59	1553	39.09	1604	42.63						
21000	3387	1475	34.07	1532	38.22	1585	41.86	1635	45.54	1683	49.26				
22000	3548	1505	36.17	1563	40.58	1617	44.78	1666	48.60	1714	52.45	1760	56.35		
23000	3709	1536	38.39	1593	42.93	1648	47.57	1698	51.82	1745	55.81	1791	59.84	1835	63.92
24000	3870	1567	40.72	1624	45.40	1678	50.17	1729	55.03	1777	59.34	1822	63.51	1866	67.72
25000	4032	1598	43.17	1655	47.98	1708	52.89	1759	57.88	1809	62.96	1854	67.35	1897	71.69
26000	4193	1630	45.74	1686	50.69	1739	55.73	1790	60.86	1839	66.08	1886	71.37	1929	75.85
27000	4354	1662	48.44	1717	53.53	1770	58.71	1821	63.97	1869	69.32	1916	74.75	1961	80.20
28000	4516	1701	51.57	1749	56.50	1801	61.82	1852	67.22	1900	72.70	1946	78.26	1991	83.90
29000	4677	1741	54.92	1781	59.61	1833	65.07	1883	70.61	1930	76.22	1977	81.92	2021	87.69
30000	4838	1781	58.45	1821	63.25	1865	68.46	1914	74.14	1962	79.89	2007	85.72	2052	91.63
31000	5000	1822	62.16	1861	67.09	1899	72.08	1946	77.82	1993	83.71	2038	89.68	2082	95.72
32000	5161	1863	66.06	1901	71.11	1939	76.24	1978	81.65	2025	87.68	2070	93.78	2113	99.96
33000	5322	1904	70.15	1942	75.34	1979	80.58	2014	85.89	2057	91.81	2101	98.05	2145	104.36
34000	5483	1946	74.45	1983	79.76	2019	85.13	2054	90.57	2089	96.09	2133	102.48	2176	108.93

Volume CFM	O.V. fpm	14" SP		15" SP		16" SP		17" SP		18" SP		19" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
24000	3870	<i>1908</i>	<i>71.96</i>										
25000	4032	<i>1939</i>	<i>76.07</i>	<i>1980</i>	<i>80.49</i>	<i>2020</i>	<i>84.94</i>						
26000	4193	<i>1971</i>	<i>80.37</i>	<i>2011</i>	<i>84.92</i>	<i>2050</i>	<i>89.50</i>	<i>2089</i>	<i>94.13</i>				
27000	4354	<i>2002</i>	<i>84.85</i>	<i>2042</i>	<i>89.54</i>	<i>2082</i>	<i>94.26</i>	<i>2120</i>	<i>99.02</i>	<i>2157</i>	<i>103.81</i>		
28000	4516	<i>2034</i>	<i>89.53</i>	<i>2074</i>	<i>94.36</i>	<i>2113</i>	<i>99.22</i>	<i>2151</i>	<i>104.11</i>	<i>2188</i>	<i>109.04</i>	<i>2224</i>	<i>113.99</i>
29000	4677	<i>2064</i>	<i>93.54</i>	<i>2106</i>	<i>99.38</i>	<i>2145</i>	<i>104.38</i>	<i>2182</i>	<i>109.41</i>	<i>2219</i>	<i>114.47</i>	<i>2255</i>	<i>119.56</i>
30000	4838	<i>2095</i>	<i>97.61</i>	<i>2136</i>	<i>103.66</i>	<i>2177</i>	<i>109.75</i>	<i>2214</i>	<i>114.92</i>	<i>2251</i>	<i>120.12</i>	<i>2286</i>	<i>125.35</i>
31000	5000	<i>2125</i>	<i>101.83</i>	<i>2166</i>	<i>108.02</i>	<i>2207</i>	<i>114.27</i>	<i>2246</i>	<i>120.60</i>	<i>2283</i>	<i>125.99</i>		
32000	5161	<i>2156</i>	<i>106.21</i>	<i>2197</i>	<i>112.53</i>	<i>2237</i>	<i>118.92</i>	<i>2276</i>	<i>125.38</i>				
33000	5322	<i>2187</i>	<i>110.75</i>	<i>2228</i>	<i>117.20</i>	<i>2267</i>	<i>123.73</i>						
34000	5483	<i>2218</i>	<i>115.45</i>	<i>2259</i>	<i>122.04</i>	<i>2298</i>	<i>128.70</i>						

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 28 and 30 for minimum motor frame sizes regardless of bhp. HDBI-330 has a fixed housing and is not rotatable in the field.

HDBI-360**Wheel**

Diameter - 36.00"

Outlet OD

Size - 27.25" x 40.25"

Area - 7.50 ft² ID**Inlet OD**

Size - 40.00"

Area - 8.10 ft² ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

Class III = bold text face*Class IV = italic text face below Class III*

Volume CFM	O.V. fpm	0" SP		1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
24000	3200	904	9.57	969	13.11	1030	16.78	1089	20.51	1143	24.37	1201	28.32	1254	32.38
25000	3333	941	10.82	1005	14.50	1063	18.32	1120	22.18	1173	26.16	1228	30.25	1281	34.43
26000	3466	979	12.17	1040	15.99	1096	19.96	1152	23.95	1204	28.06	1255	32.28	1307	36.58
27000	3600	1017	13.63	1076	17.59	1130	21.71	1184	25.83	1235	30.07	1283	34.42	1335	38.85
28000	3733	1054	15.20	1112	19.30	1164	23.55	1216	27.84	1266	32.20	1313	36.67	1362	41.24
29000	3866	1092	16.89	1148	21.13	1198	25.52	1249	29.95	1298	34.45	1343	39.04	1389	43.74
30000	4000	1130	18.69	1184	23.08	1233	27.61	1281	32.20	1329	36.82	1375	41.54	1417	46.37
31000	4133	1167	20.63	1220	25.15	1268	29.82	1314	34.57	1361	39.32	1406	44.17	1448	49.12
32000	4266	1205	22.69	1256	27.35	1303	32.16	1347	37.07	1394	41.95	1437	46.93	1479	52.01
33000	4400	1243	24.88	1292	29.69	1338	34.63	1381	39.70	1426	44.72	1469	49.83	1510	55.03
34000	4533	1280	27.21	1328	32.16	1373	37.24	1415	42.44	1459	47.63	1501	52.87	1541	58.20
35000	4666	1318	29.68	1365	34.77	1408	39.99	1450	45.33	1491	50.69	1533	56.05	1573	61.51
36000	4800	1356	32.30	1401	37.53	1444	42.89	1484	48.36	1524	53.89	1565	59.39	1605	64.97
37000	4933	1393	35.07	1438	40.44	1479	45.94	1519	51.55	1557	57.24	1598	62.87	1636	68.59
38000	5066	1431	37.99	1474	43.50	1515	49.14	1554	54.89	1591	60.74	1630	66.52	1668	72.36
39000	5200	1469	41.07	1511	46.73	1551	52.50	1589	58.39	1625	64.37	1663	70.32	1701	76.30
40000	5333	1506	44.31	1548	50.11	1587	56.02	1624	62.04	1660	68.17	1696	74.29	1733	80.40
41000	5466	1544	47.72	1584	53.65	1623	59.72	1659	65.87	1694	72.13	1729	78.43	1766	84.67

Volume CFM	O.V. fpm	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
24000	3200	1308	36.67	1366	41.34	1420	46.11	1472	50.98						
25000	3333	1330	38.70	1385	43.40	1440	48.31	1491	53.30	1541	58.38				
26000	3466	1357	40.98	1405	45.55	1459	50.58	1511	55.71	1560	60.92	1607	66.22		
27000	3600	1383	43.38	1429	47.98	1479	52.94	1530	58.20	1579	63.55	1626	68.98	1672	74.49
28000	3733	1410	45.89	1456	50.62	1499	55.43	1550	60.79	1599	66.26	1646	71.82	1691	77.46
29000	3866	1437	48.52	1482	53.38	1526	58.31	1570	63.47	1618	69.08	1665	74.77	1710	80.54
30000	4000	1464	51.28	1509	56.26	1552	61.32	1593	66.45	1638	71.98	1685	77.81	1729	83.71
31000	4133	1492	54.16	1536	59.27	1579	64.46	1619	69.72	1659	75.05	1704	80.95	1749	86.98
32000	4266	1519	57.17	1563	62.42	1606	67.73	1646	73.12	1685	78.57	1724	84.19	1769	90.36
33000	4400	1549	60.32	1591	65.70	1633	71.14	1673	76.66	1711	82.24	1749	87.88	1788	93.84
34000	4533	1580	63.62	1619	69.12	1660	74.69	1700	80.33	1738	86.04	1775	91.81	1811	97.65
35000	4666	1611	67.05	1648	72.68	1687	78.39	1727	84.16	1765	89.99	1802	95.89	1837	101.85
36000	4800	1642	70.64	1678	76.40	1715	82.23	1754	88.13	1792	94.09	1828	100.12	1864	106.20
37000	4933	1673	74.39	1709	80.27	1744	86.23	1782	92.26	1819	98.35	1855	104.50	1890	110.71
38000	5066	1705	78.29	1740	84.29	1774	90.38	1809	96.54	1846	102.76	1882	109.04	1917	115.38
39000	5200	1737	82.35	1772	88.49	1805	94.70	1838	100.98	1874	107.34	1910	113.75	1944	120.22
40000	5333	1769	86.58	1803	92.84	1836	99.18	1869	105.59	1902	112.08	1937	118.62	1971	125.22
41000	5466	1801	90.99	1835	97.38	1868	103.84	1900	110.37	1931	116.98	1965	123.66	1999	130.39

Volume CFM	O.V. fpm	14" SP		15" SP		16" SP		17" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
28000	3733	1734	83.18						
29000	3866	1754	86.39	1796	92.31				
30000	4000	1773	89.69	1815	95.74	1855	101.87		
31000	4133	1792	93.09	1834	99.28	1875	105.54	1914	111.86
32000	4266	1812	96.60	1853	102.92	1894	109.30	1933	115.76
33000	4400	1831	100.22	1873	106.66	1913	113.18	1952	119.77
34000	4533	1851	103.94	1892	110.52	1933	117.17	1972	123.89
35000	4666	1872	107.87	1912	114.49	1952	121.28	1991	128.13
36000	4800	1898	112.36	1932	118.58	1972	125.50	2011	132.48

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR².

See page 28 and 30 for minimum motor frame sizes regardless of bhp. HDBI-360 has a fixed housing and is not rotatable in the field.

Maximum Shaft and Bearing Speed for Belt Drive Fans

Maximum Wheel Speed and WR^2 (lb-ft²) for Direct Drive Fans

Fan Size	Maximum Shaft and Bearing Speed			HDBI Steel Wheel note 1						SQBI Steel Wheel note 1				Aluminum Wheel note 2	
				Class II		Class III		Class IV		Class II		Class III			
	Class II	Class III	Class IV	Wheel WR ²	Maximum RPM	Wheel WR ²	Maximum RPM	Wheel WR ²	Maximum RPM	Wheel WR ²	Maximum RPM	Wheel WR ²	Maximum RPM	Wheel WR ²	Maximum RPM
120	4189	4985		2.8	4380	2.8	5400			3.9	4065	4.1	5000	1.2	5400
130	3834	4738	4999	4.2	3900			4.2	4999	5.3	3750	5.7	4700	1.7	4999
150	3513	4357	4712	5.9	3513			5.9	4712	8.1	3050	8.3	4117	2.5	4712
160	3195	3961	4285	9.0	3195			9.9	4285	11.7	3042	12.4	3724	4.2	4285
180	2903	3591	3885	13.9	2903			15.0	3885	16.2	2593	17.1	3600	6.7	3885
200	2661	3285	3574	19.0	2661			20.8	3574	24.6	2380	26.5	3550	9.8	3574
220	2304	2824	3447	26.1	2304			29.1	3550	36.3	2115	39.6	3160	14.7	3550
240	2132	2565	2837	54.6	2132			58.2	2837			63.3	2740	26.5	2837
270	1854	2262	2476					89.9	2476			108.3	2493	45.9	2476
300	1680	2075	2300					130.2	2300			165.0	2243	64.3	2300
330	1500	1880	2300					193.6	2300			244.2	1935	130.0	2300
360	1380	1735	1950					255.8	1950			349.6	1750	176.0	1950

1 For steel wheels up to 175°F (80°C).

2 For aluminum wheels up to 200°F (93°C). All aluminum wheels are HDBI type, Class IV construction.

Approximate Shipping Weight Less Motor and Options

Fan Size	Arrangement 1		Arrangement 4		Arrangement 4HM		Arrangement 8		Arrangement 9		Arrangement 9CB		Arrangement 10	
	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III
180	350	360	300	310	270	280	380	390	380	390	500	510	390	400
200	390	410	350	360	320	330	430	450	430	450	560	580	430	450
220	470	500	430	440	390	400	520	540	530	550	660	680	530	550
240	610	620	550	555	450	455	670	690	660	670	800	810	620	630
270	740	750	690	695	550	555	820	840	800	810	960	970	760	770
300	910	945	840	845	640	645	1000	1000	970	1005	1130	1165	900	930
330	1200	1320	1090	1090	940				1260	1380	1420	1560		
360	1410	1600	1390	1430	1100				1470	1660	1650	1840		

Note — Blower housing dimensions common to all Blower Arrangements

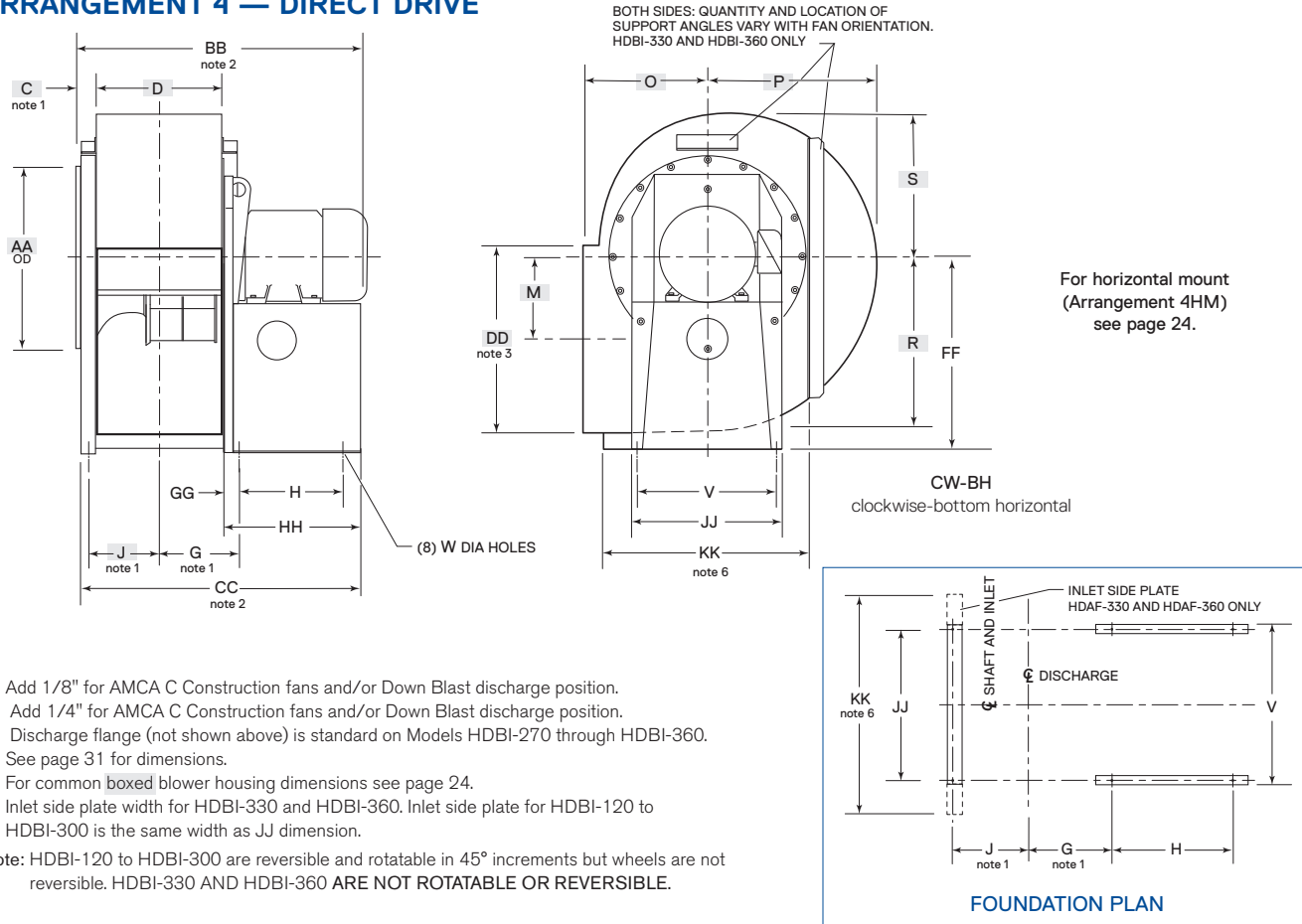
Model	C note 1	D note 2 - note 3	J note 1 - note 2	M	O note 3	P	R	S	AA	DD note 3
HDBI-120	4 1/16"	9 3/8"	5 3/4"	6 3/16"	9 15/16"	12 3/8"	13"	10 3/8"	13 1/4"	13 3/4"
HDBI-130	4 1/16"	10 3/8"	6 1/4"	6 13/16"	10 13/16"	13 3/4"	14 7/16"	11 9/16"	14 5/8"	15 1/4"
HDBI-150	4 1/16"	11 3/8"	6 3/4"	7 9/16"	11 3/4"	15 3/16"	15 15/16"	12 3/4"	16 1/8"	16 13/16"
HDBI-160	4 1/16"	12 1/2"	7 5/16"	8 5/16"	12 11/16"	16 11/16"	17 1/2"	14"	18"	18 7/16"
HDBI-180	4 1/16"	13 7/8"	8"	9 1/4"	13 13/16"	18 7/16"	19 7/16"	15 1/2"	20"	20 3/8"
HDBI-200	4 1/16"	15 1/4"	8 11/16"	10 1/16"	14 15/16"	20 1/4"	21 1/4"	17"	22"	22 3/8"
HDBI-220	4 1/16"	16 7/8"	9 1/2"	11 3/16"	16 3/8"	22 1/2"	23 5/8"	18 7/8"	24 5/8"	24 7/8"
HDBI-240	6 1/16"	18 9/16"	10 3/8"	12 5/16"	18 13/16"	24 3/4"	26"	20 3/4"	27"	27 3/8"
HDBI-270	6 1/16"	20 7/16"	11 5/16"	13 9/16"	20 5/8"	27 1/4"	28 5/8"	22 7/8"	30"	30 1/16"
HDBI-300	6 1/16"	22 3/4"	12 7/16"	15 1/8"	22 5/8"	30 3/8"	31 7/8"	25 1/2"	33 1/2"	33 9/16"
HDBI-330*	3 1/4"	24 7/8"	14 1/2"	16 3/16"	24 11/16"	33 3/8"	35"	28"	36 3/4"	36 7/8"
HDBI-360*	3 1/4"	27 1/4"	15 11/16"	18 1/8"	27 3/16"	36 1/2"	38 1/4"	30 1/2"	40"	40 1/4"

*HDBI-330 and 360 have fixed housings and are not rotatable in the field.

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Dimensions shown are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.

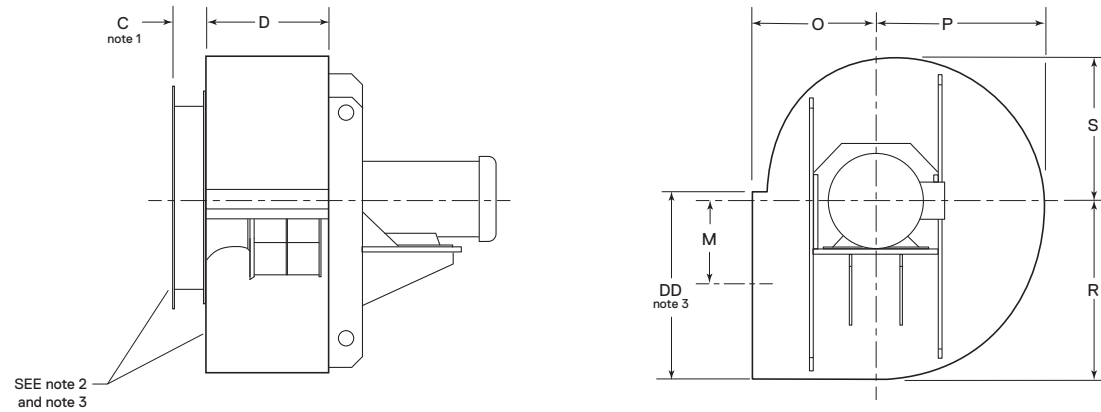
- 3 Discharge flange is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions

ARRANGEMENT 4 — DIRECT DRIVE



- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
 - 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
 - 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
 - 4 For common boxed blower housing dimensions see page 24.
 - 5 Inlet side plate width for HDBI-330 and HDBI-360. Inlet side plate for HDBI-120 to HDBI-300 is the same width as JJ dimension.
- Note: HDBI-120 to HDBI-300 are reversible and rotatable in 45° increments but wheels are not reversible. HDBI-330 AND HDBI-360 ARE NOT ROTATABLE OR REVERSIBLE.

Model	Motor Frame	G note 1	H	V	W	BB note 2	CC note 2	FF	GG	HH	JJ	KK note 6
HDBI-120	142T-184T	7 1/16"	5 1/2"	14"	9/16"	24 15/16"	22 15/16"	15 1/2"	3"	11 1/2"	16"	
HDBI-130	143T-215T	8 3/16"	7 5/8"	15 3/4"	9/16"	28 1/16"	26 1/16"	16 5/8"	3"	13 5/8"	17 3/4"	
HDBI-150	143T-215T	8 1/16"	7 5/8"	17 1/4"	9/16"	29 1/16"	27 1/16"	18 1/8"	3"	13 5/8"	19 1/4"	
	254T-256T	8 1/16"	16"	17 1/4"	9/16"	37 7/16"	35 7/16"	18 1/8"	3"	22"	19 1/4"	
HDBI-160	143T-184T	9 1/4"	7 5/8"	19 1/8"	9/16"	30 3/16"	28 3/16"	19 3/4"	3"	13 5/8"	21 1/8"	
	213T-256T	9 1/4"	17"	19 1/8"	9/16"	39 3/16"	37 3/16"	19 3/4"	3"	23"	21 1/8"	
HDBI-180	143T-215T	9 15/16"	8 3/8"	21 1/2"	9/16"	32 5/16"	30 5/16"	22 3/4"	3"	14 3/8"	23 1/2"	
	254T-286T	9 15/16"	18 1/2"	21 1/2"	9/16"	42 7/16"	40 7/16"	22 3/4"	3"	24 1/2"	23 1/2"	
	324T-326T	9 15/16"	21"	21 1/2"	9/16"	44 15/16"	42 15/16"	22 3/4"	3"	27"	23 1/2"	
HDBI-200	182T-256T	10 5/8"	11 1/2"	23 1/2"	9/16"	36 13/16"	34 13/16"	23 1/2"	3"	17 1/2"	25 1/2"	
	284T-286T	10 5/8"	18 1/2"	23 1/2"	9/16"	43 13/16"	41 13/16"	23 1/2"	3"	24 1/2"	25 1/2"	
	324T-326T	10 5/8"	21"	23 1/2"	9/16"	46 5/16"	44 5/16"	23 1/2"	3"	27"	25 1/2"	
HDBI-220	182T-256T	11 7/16"	11 1/2"	26 1/8"	9/16"	38 7/16"	36 7/16"	26 1/4"	3"	17 1/2"	28 1/8"	
	284T-326T	11 7/16"	21"	26 1/8"	9/16"	47 15/16"	45 15/16"	26 1/4"	3"	27"	28 1/8"	
HDBI-240	213T-256T	12 5/16"	11 1/2"	28 1/4"	9/16"	42 1/8"	38 1/8"	28 1/2"	3"	17 1/2"	30 3/4"	
	284T-326T	12 5/16"	21"	28 1/4"	9/16"	51 5/8"	47 5/8"	28 1/2"	3"	27"	30 3/4"	
HDBI-270	213T-256T	13 1/4"	11 1/2"	31"	9/16"	44"	40"	31 1/4"	3"	17 1/2"	33 3/4"	
	284T-326T	13 1/4"	21"	31"	9/16"	53 1/2"	49 1/2"	31 1/4"	3"	27"	33 3/4"	
HDBI-300	213T-256T	14 3/8"	11 1/2"	34 1/4"	9/16"	46 5/16"	42 5/16"	34 1/2"	3"	17 1/2"	37 1/4"	
	284T-326T	14 3/8"	21"	34 1/4"	9/16"	55 13/16"	51 13/16"	34 1/2"	3"	27"	37 1/4"	
HDBI-330	284T-326T	15 15/16"	20"	28"	3/4"	55 1/8"	54 15/16"	38 3/4"	3 1/2"	27"	30"	41 3/4"
	364T-405T	5 15/16"	25"	28"	3/4"	60 1/8"	59 15/16"	38 3/4"	3 1/2"	32"	30"	41 3/4"
	444T	5 15/16"	29"	28"	3/4"	64 1/8"	63 5/16"	38 3/4"	3 1/2"	36"	30"	41 3/4"
HDBI-360	284T-326T	17 1/8"	20"	31"	3/4"	57 1/2"	57 5/16"	42"	3 1/2"	27"	33"	45"
	364T-405T	17 1/8"	25"	31"	3/4"	62 1/2"	62 5/16"	42"	3 1/2"	32"	33"	45"
	444T	17 1/8"	29"	31"	3/4"	66 1/2"	66 5/16"	42"	3 1/2"	36"	33"	45"

ARRANGEMENT 4HM — DIRECT DRIVE

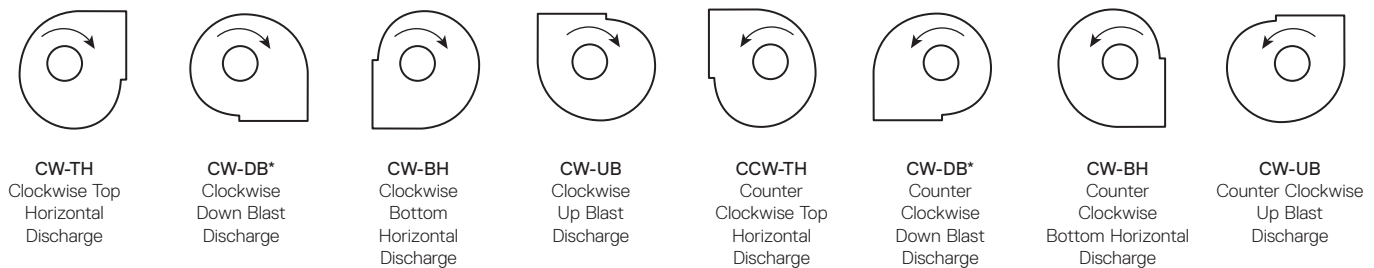
- 1 Add 1/8" for AMCA "C" Construction. Includes optional inlet flange.
- 2 Optional inlet flange may be added to assist in fan installation. See page 31 for flange dimensions.
- 3 Discharge flange is optional on Models HDBI-120 and HDBI-240 and is standard on Models HDBI-270 and HDBI-300. See page 31 for flange dimensions.

- 4 Dimensions are for 100% width housings. For partial width housings, contact your local Cincinnati Fan sales representative

Model	Motor Frame	C note 1	D	M	O	P	R	S	DD note 3	Shipping Weight less motor lb
HDBI-120	143T-184T	4 1/4"	9 3/8"	6 3/16"	9 15/16"	12 3/8"	13"	10 3/8"	13 3/4"	150
HDBI-130	143T-215T	4 1/4"	10 3/8"	6 13/16"	10 13/16"	13 3/4"	14 7/16"	11 9/16"	15 1/4"	170
HDBI-150	143T-215T	4 1/4"	11 3/8"	7 9/16"	11 3/4"	15 3/16"	15 15/16"	12 3/4"	16 13/16"	190
HDBI-160	143T-256T	4 1/4"	12 1/2"	8 3/16"	12 11/16"	16 11/16"	17 1/2"	14"	18 7/16"	210
HDBI-180	143T-326T	4 1/4"	13 7/8"	9 1/4"	13 13/16"	18 7/16"	19 7/16"	15 1/2"	20 3/8"	270
HDBI-200	182T-326T	4 1/4"	15 1/4"	10 1/16"	14 15/16"	20 1/4"	21 1/4"	17"	22 3/8"	320
HDBI-220	182T-326T	4 1/4"	16 7/8"	11 3/16"	16 3/8"	22 1/2"	23 5/8"	18 7/8"	24 7/8"	390
HDBI-240	213T-326T	6 1/4"	18 9/16"	12 9/16"	18 13/16"	24 3/4"	26"	20 3/4"	27 3/8"	450
HDBI-270	213T-326T	6 1/4"	20 7/16"	13 9/16"	20 5/8"	27 1/4"	28 5/8"	22 7/8"	30 1/16"	550
HDBI-300	213T-326T	6 1/4"	22 3/4"	15 1/8"	22 5/8"	30 3/8"	31 7/8"	25 1/2"	33 9/16"	640
HDBI-330	284T-365T	6 1/8"	24 7/8"	16 9/16"	24 11/16"	33 3/8"	35"	28"	36 7/8"	940
HDBI-360	284T-365T	6 1/8"	27 1/4"	18 1/8"	27 3/16"	36 1/2"	38 1/4"	30 1/2"	40 1/4"	1100

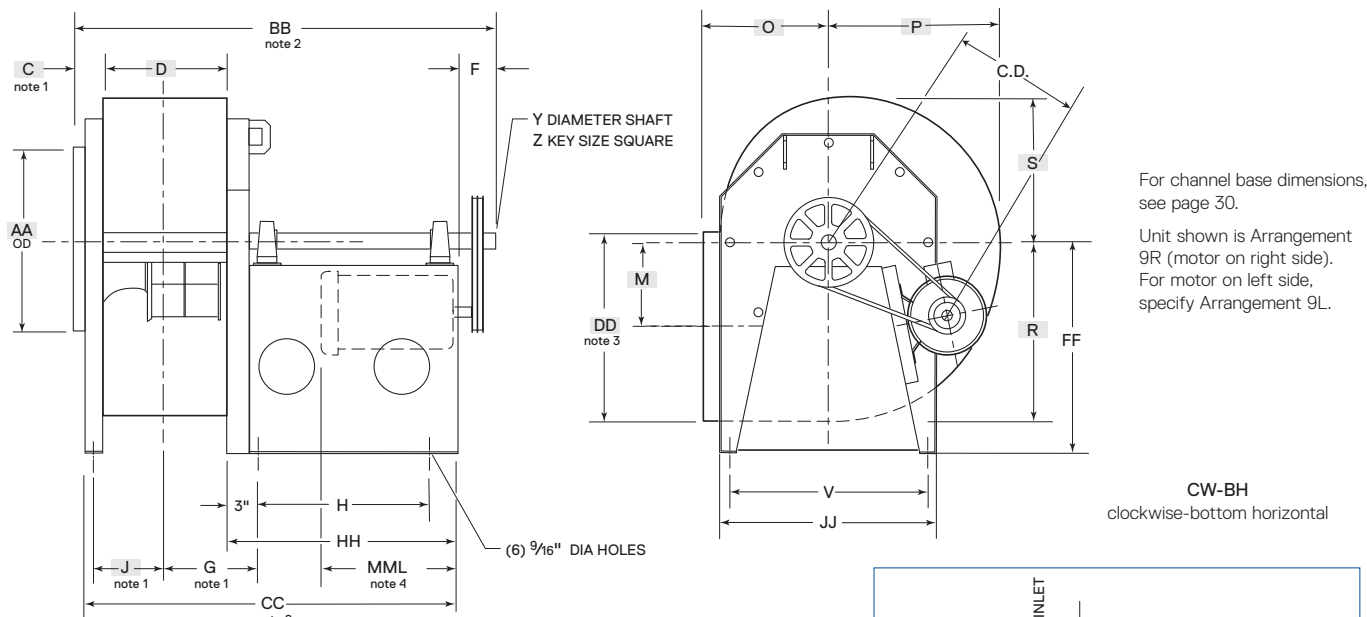
Sixteen Discharge Positions Available. 45° Discharge Positions Not shown†

Discharges shown are determined by viewing fan from motor or drive side



*Not available on models HDBI-270 through HDBI-360 or any models with discharge flange option without special discharge extension. For arrangements 9CB units, contact your local Cincinnati sales representative.

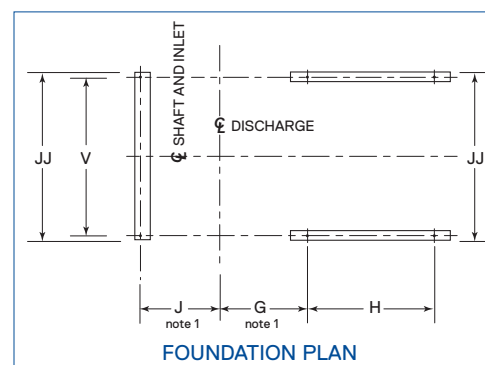
† See (*) on page 31

ARRANGEMENT 1 AND 9 — BELT DRIVE specify 9R or 9L

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
- 4 **MML** is maximum motor length on customer supplied motor. Motor manufacturers C dimension cannot exceed **MML** without a special base.
- 5 For common boxed blower housing dimensions see page 22.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

⚠ CAUTION All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

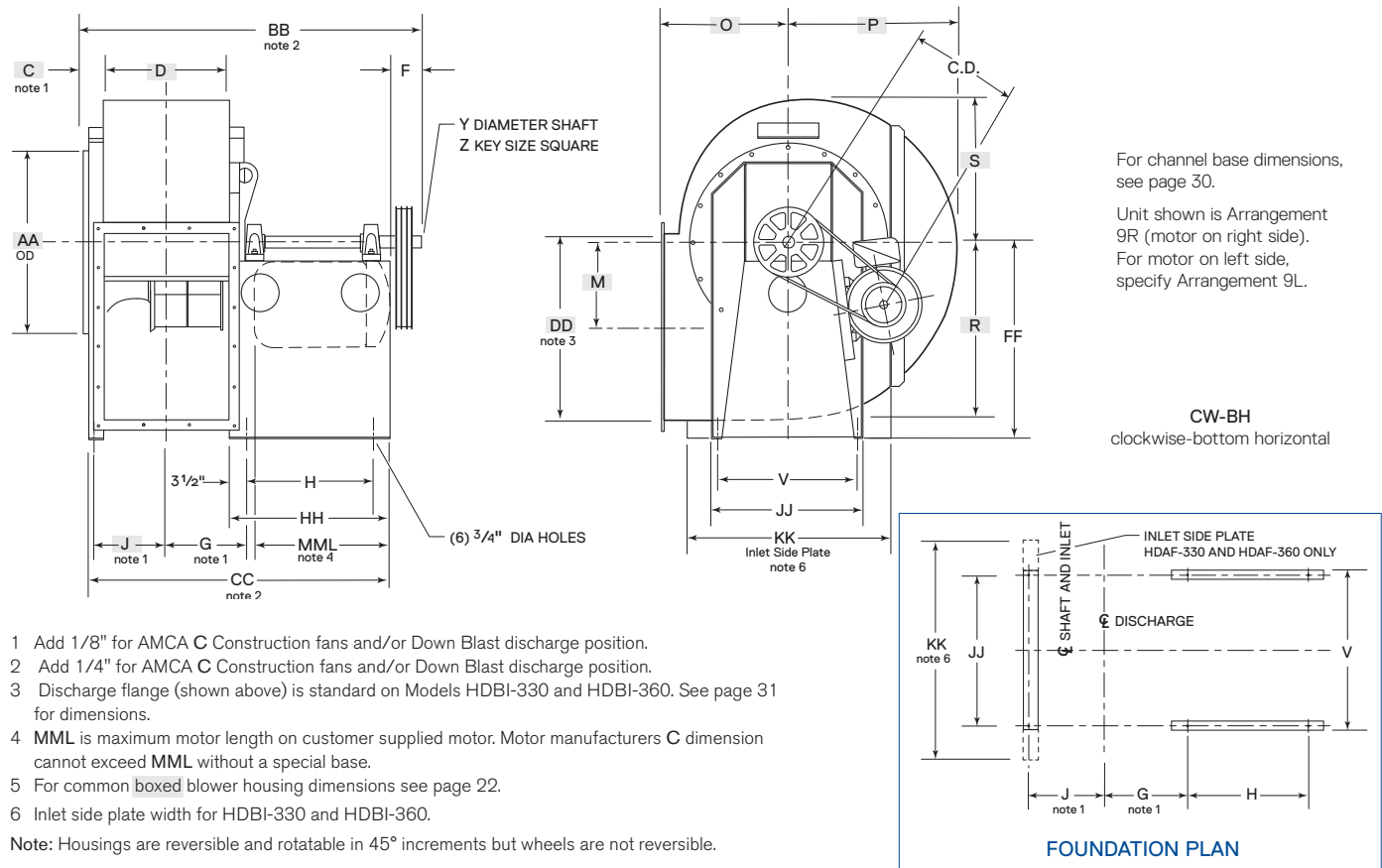


Model	Motor Frame	F	G note 1	H	V	Y			Z			BB note 2	CC note 2	FF	HH	JJ	MML note 4
						CL II	CL III	CL IV	CL II	CL III	CL IV						
HDBI-120	56-215T	4"	7 11/16"	12 3/4"	14"	1 3/16"	1 3/16"		1/4"	1/4"		36 3/16"	30 3/16"	15 1/2"	18 3/4"	16"	19 3/8"
HDBI-130	56-256T	4"	8 3/16"	17"	15 3/4"	1 3/16"	1 7/16"	1 7/16"	1/4"	3/8"	3/8"	41 7/16"	35 7/16"	16 5/8"	23"	17 3/4"	24 1/4"
HDBI-150	56-256T	4"	8 11/16"	17"	17 1/4"	1 7/16"	1 11/16"	1 11/16"	3/8"	3/8"	3/8"	42 7/16"	36 7/16"	18 1/8"	23"	19 1/4"	24 1/4"
HDBI-160	56-256T	4"	9 1/4"	17"	19 1/8"	1 7/16"	1 11/16"	1 15/16"	3/8"	3/8"	1/2"	43 9/16"	37 9/16"	19 3/4"	23"	21 1/8"	24 1/4"
HDBI-180	145T-286T	4"	9 15/16"	18 1/2"	21 1/2"	1 7/16"	1 11/16"	1 15/16"	3/8"	3/8"	1/2"	46 7/16"	40 7/16"	22 3/4"	24 1/2"	23 1/2"	26 3/8"
HDBI-200	145T-286T	4"	10 5/8"	18 1/2"	23 1/2"	1 7/16"	1 15/16"	2 3/16"	3/8"	1/2"	1/2"	47 13/16"	41 13/16"	23 1/2"	24 1/2"	25 1/2"	26 3/8"
HDBI-220	145T-324T	5"	11 7/16"	21"	26 1/8"	1 7/16"	1 15/16"	2 3/16"	3/8"	1/2"	1/2"	52 15/16"	45 15/16"	26 1/4"	27"	28 1/8"	29 1/2"
HDBI-240	145T-324T	6"	12 5/16"	21"	28 1/4"	1 11/16"	2 3/16"	2 3/16"	3/8"	1/2"	1/2"	57 5/8"	47 5/8"	28 1/2"	27"	30 3/4"	29 1/2"
HDBI-270	182T-324T	6"	13 1/4"	21"	31"	1 11/16"	2 3/16"	2 3/16"	3/8"	1/2"	5/8"	59 1/2"	49 1/2"	31 1/4"	27"	33 3/4"	29 1/2"
HDBI-300	182T-324T	6"	14 3/8"	24 3/4"	34 1/4"	1 15/16"	2 7/16"	2 7/16"	1/2"	5/8"	5/8"	65 9/16"	55 9/16"	34 1/2"	30 3/4"	37 1/4"	30 1/4"

C.D. Belt Center Distance

Model	56-145T		182T-184T		213T-215T		254T-256T		284T-286T		324T-326T		364T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDBI-120	11 3/16"	12 3/4"	12 1/8"	13 1/2"	12 5/16"	13 11/16"								
HDBI-130	11 1/8"	12 11/16"	12 13/16"	14 3/8"	13 1/8"	14 11/16"	13 7/16"	14 13/16"						
HDBI-150	11 5/8"	13 3/16"	13 7/16"	14 15/16"	13 7/8"	15 5/8"	14 5/16"	16"						
HDBI-160	12 3/16"	13 11/16"	14"	15 1/2"	15 1/8"	17 3/16"	15 11/16"	17 5/8"						
HDBI-180	12 7/8"	14 3/8"	14 9/16"	16 1/16"	15 13/16"	17 11/16"	17 1/2"	19 11/16"	17 13/16"	19 3/16"				
HDBI-200	12 5/8"	14 1/4"	14 1/4"	15 7/8"	15 5/8"	17 1/2"	17 1/4"	19 9/16"	18 1/8"	20 13/16"				
HDBI-220	13 9/16"	15 1/16"	15 3/16"	16 5/8"	16 7/16"	18 3/16"	18 1/8"	20 1/4"	19 1/4"	21 3/4"	20 3/4"	22 9/16"		
HDBI-240	13 11/16"	15 3/16"	15 7/16"	16 15/16"	16 11/16"	18 9/16"	18 1/2"	20 11/16"	19 7/16"	22"	21 5/16"	24 3/8"		
HDBI-270			16"	17 1/2"	17 5/16"	19 3/16"	19"	21 1/4"	20 1/16"	22 11/16"	21 15/16"	25 1/16"		
HDBI-300			15 15/16"	17 5/16"	17 15/16"	19 1/4"	19 9/16"	21 1/16"	20 5/8"	23 1/8"	22 7/16"	25 1/2"	23 15/16"	27 3/8"

ARRANGEMENT 1 AND 9 — BELT DRIVE specify 9R or 9L HDBI-330 HDBI-360



Model	Motor Frame	F	G note 1	H	V	Y			Z			BB note 2	CC note 2	FF	HH	JJ	KK note 6	MML note 4
						CL II	CL III	CL IV	CL II	CL III	CL IV							
HDBI-330	182T-365T	6"	15 15/16"	25"	28"	2 3/16"	2 7/16"	2 11/16"	1 1/2"	5/8"	5/8"	66 1/8"	59 15/16"	38 3/4"	32"	30"	41 3/4"	33"
HDBI-360	182T-365T	6"	17 1/8"	25"	31"	2 7/16"	2 11/16"	2 15/16"	5/8"	5/8"	3/4"	68 1/2"	62 5/16"	42"	32"	33"	45"	33"

C.D. Belt Center Distance

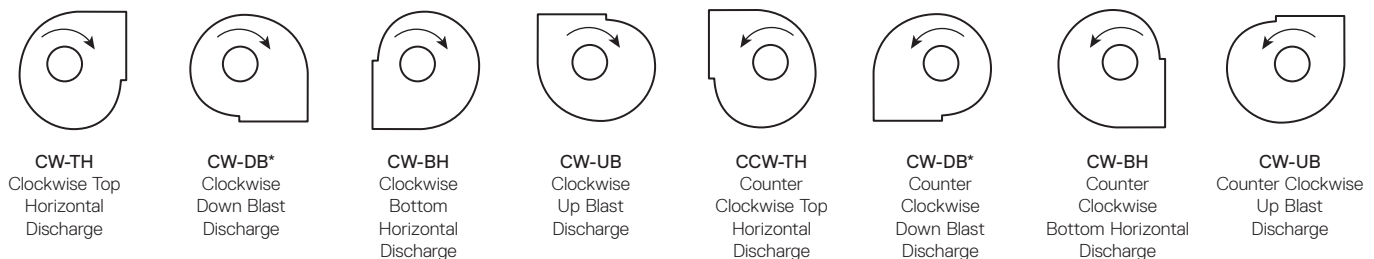
Motor Frame	Class II - Class III		Motor Frame	Class II - Class III	
	Min	Max		Min	Max
182T-184T	17 9/16"	18 5/8"	284T-286T	21 9/16"	23 11/16"
213T-215T	18 7/8"	20 5/16"	324T-326T	23 1/2"	26 1/16"
254T-256T	20 9/16"	22 5/16"	364T-365T	24 15/16"	28"

C.D. Belt Center Distance

Motor Frame	Class IV		Motor Frame	Class IV	
	Min	Max		Min	Max
182T-184T	17 7/8"	19 3/16"	284T-286T	22 1/8"	24 5/16"
213T-215T	19 3/16"	20 7/8"	324T-326T	24"	26 11/16"
254T-256T	21 1/16"	22 7/8"	364T-365T	25 3/8"	28 5/8"

Sixteen Discharge Positions Available. 45° Discharge Positions Not shown†

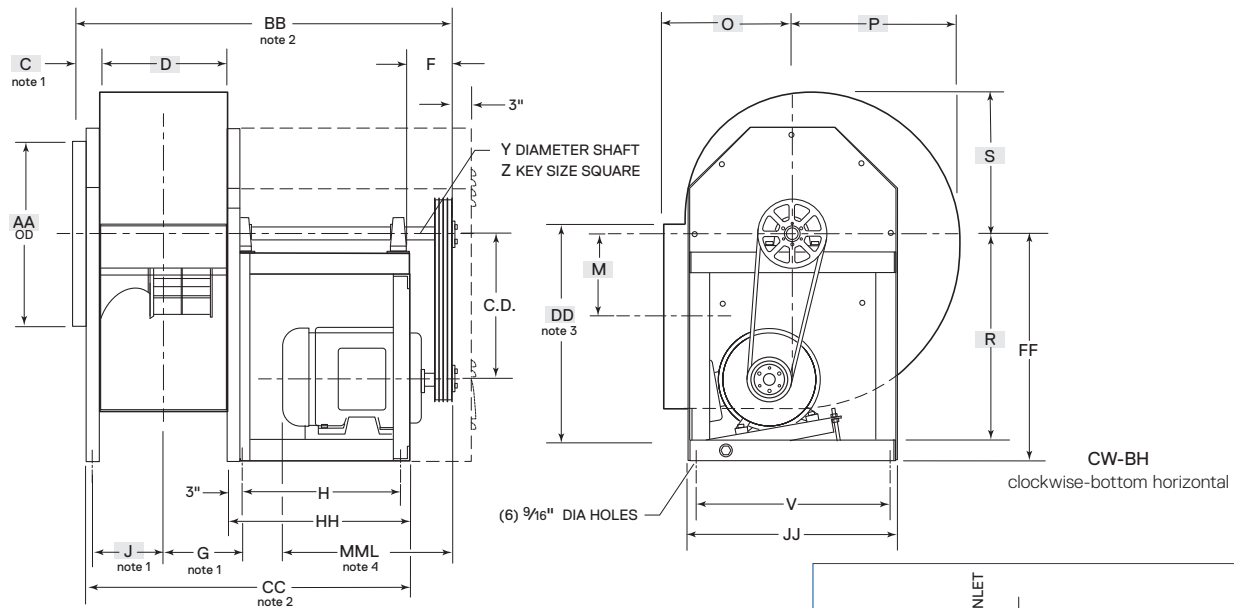
Discharges shown are determined by viewing fan from motor or drive side



*Not available on models HDBI-270 through HDBI-360 or any models with discharge flange option without special discharge extension.
For arrangements 9CB units, contact your local Cincinnati sales representative.

† See (*) on page 31

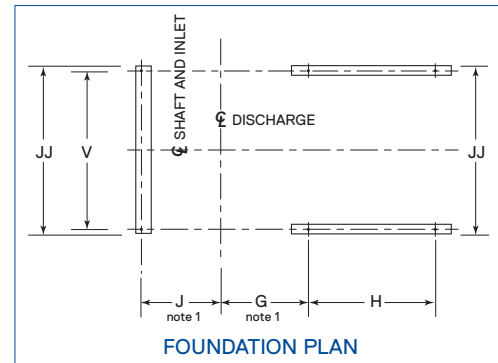
ARRANGEMENT 10 — BELT DRIVE



- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
- 4 MML is maximum motor length on customer supplied motor. Motor manufacturers C dimension cannot exceed MML without a special base.
- 5 HDBI-330 and HDBI-360 are not available in Arrangement 10.
- 6 For common boxed blower housing dimensions see page 24.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

CAUTION All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

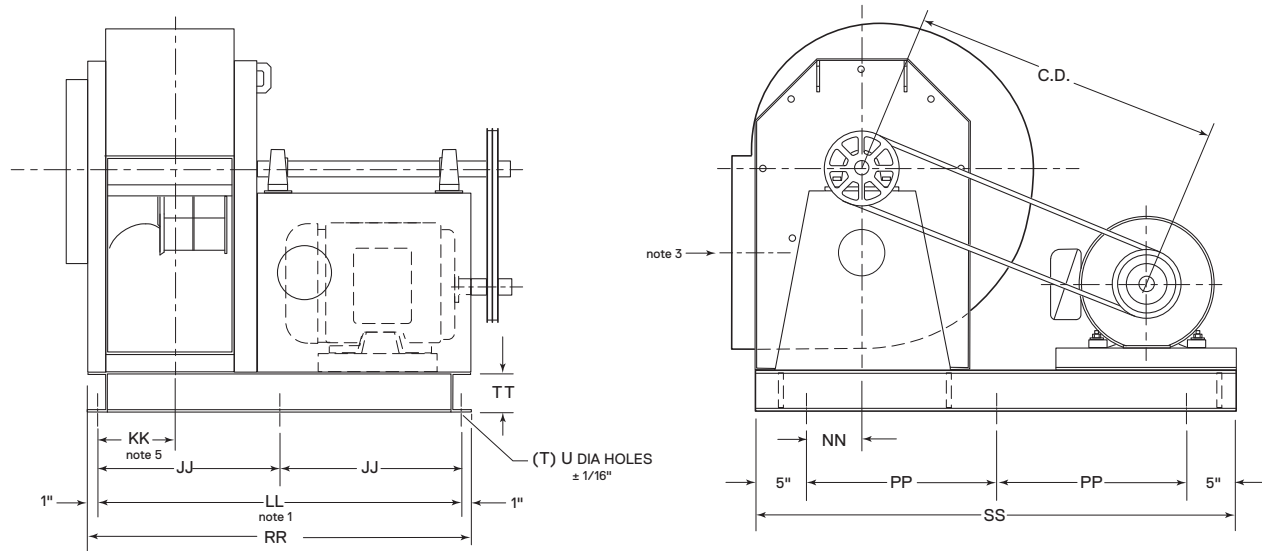


Model	Motor Frame	F	G note 1	H	V	Y			Z			BB note 2	CC note 2	FF	HH	JJ	MML note 4
						CL II	CL III	CL IV	CL II	CL III	CL IV						
HDBI-120	56-184T	4 1/8"	7 11/16"	12 3/4"	14"	1 3/16"	1 3/16"		1/4"	1/4"		36 3/16"	30 3/16"	15 1/2"	18 5/8"	16"	18 7/16"
HDBI-130	56-184T	4 1/8"	8 3/16"	17"	15 3/4"	1 3/16"	1 7/16"	1 7/16"	1/4"	3/8"	3/8"	41 7/16"	35 5/16"	16 5/8"	22 7/8"	17 3/4"	23 1/8"
HDBI-150	56-215T	4 1/8"	8 11/16"	17"	17 1/4"	1 7/16"	1 11/16"	1 11/16"	3/8"	3/8"	3/8"	42 7/16"	36 5/16"	18 1/8"	22 7/8"	19 1/4"	24 1/4"
HDBI-160	56-215T	4 1/8"	9 1/4"	17"	19 1/8"	1 7/16"	1 11/16"	1 15/16"	3/8"	3/8"	1/2"	43 9/16"	37 7/16"	19 3/4"	22 7/8"	21 1/8"	24 1/4"
HDBI-180	56-256T	4 1/8"	9 15/16"	18 1/2"	21 1/2"	1 7/16"	1 11/16"	1 15/16"	3/8"	3/8"	1/2"	46 7/16"	40 5/16"	22 3/4"	24 3/8"	23 1/2"	26 5/8"
HDBI-200	56-256T	4 1/8"	10 5/8"	18 1/2"	23 1/2"	1 7/16"	1 15/16"	2 3/16"	3/8"	1/2"	1/2"	47 13/16"	41 11/16"	23 1/2"	24 3/8"	25 1/2"	26 5/8"
HDBI-220	145T-286T	5 1/8"	11 7/16"	21"	26 1/8"	1 7/16"	1 15/16"	2 3/16"	3/8"	1/2"	1/2"	52 15/16"	45 13/16"	26 1/4"	26 7/8"	28 1/8"	29 3/4"
HDBI-240	145T-324T	6 3/16"	12 5/16"	21"	28 1/4"	1 11/16"	2 3/16"	2 3/16"	3/8"	1/2"	1/2"	57 5/8"	47 7/16"	28 1/2"	26 13/16"	30 3/4"	29 5/8"
HDBI-270	182T-324T	6 3/16"	13 1/4"	21"	31"	1 11/16"	2 3/16"	2 7/16"	3/8"	1/2"	5/8"	59 1/2"	49 5/16"	31 1/4"	26 13/16"	33 3/4"	29 5/8"
HDBI-300	182T-324T	6 3/16"	14 3/8"	24 3/4"	34 1/4"	1 15/16"	2 7/16"	2 7/16"	1/2"	5/8"	5/8"	65 9/16"	65 9/16"	34 1/2"	30 9/16"	37 1/4"	33 3/8"

C.D. Belt Center Distance

Model	56		143T-145T		182T-184T		213T-215T		254T-256T		284T-286T		324T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDBI-120	8 1/16"	10"	8 1/8"	10"	7 1/2"	9"								
HDBI-130	9 1/4"	11 1/8"	9 1/4"	11 1/8"	8 3/8"	10 1/8"								
HDBI-150	10"	12 1/8"	10"	12 1/8"	9 1/8"	11 1/8"	8 3/8"	10 3/8"						
HDBI-160	11 5/8"	13 5/8"	11 5/8"	13 5/8"	10 5/8"	12 5/8"	10"	11 7/8"						
HDBI-180	14"	16 1/8"	14"	16 1/8"	12 3/4"	15 1/8"	12"	14 3/8"	11 1/8"	13 3/8"				
HDBI-200	14 3/4"	16 7/8"	14 3/4"	16 7/8"	13 1/2"	15 7/8"	12 3/4"	15 7/8"	11"	13"				
HDBI-220			17"	19 3/4"	16 1/8"	18 5/8"	15 3/8"	17 7/8"	14 3/8"	16 7/8"	13 3/4"	16 1/4"		
HDBI-240			19 1/4"	22"	18 1/4"	21"	17 5/8"	20 1/8"	16 5/8"	19 1/8"	15 7/8"	18 3/8"	14 7/8"	17 3/8"
HDBI-270					21"	23 3/4"	20 3/8"	22 7/8"	19 3/8"	21 7/8"	18 5/8"	21 1/8"	17 5/8"	20 1/8"
HDBI-300					24 1/4"	26 7/8"	23 1/2"	26 1/8"	22 1/2"	25 1/8"	21 7/8"	24 3/8"	20 7/8"	23 3/8"

ARRANGEMENT 9RCB OR 9LCB CHANNEL BASE — BELT DRIVE



- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
 5 Subtract 1/8" for AMCA C Construction.

Unit shown is Arrangement 9RCB (motor on right side).
 For motor on left side, specify Arrangement 9LCB.

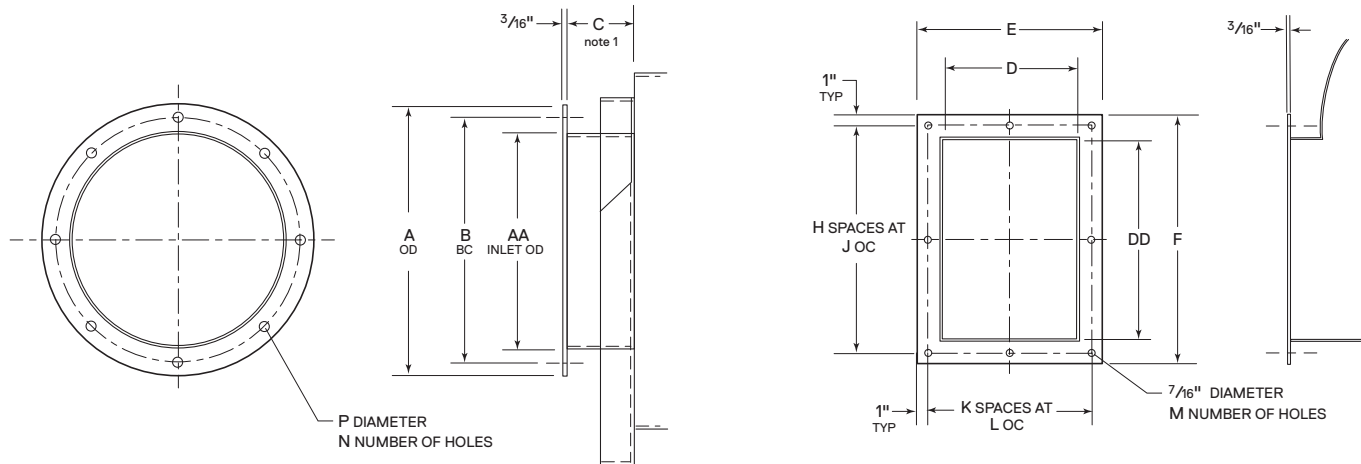
Channel base arrangements not available with Down Blast or 45°
 Bottom Angular Down Discharge fan positions.

Model	Motor Frame	T	U	KK note 5	JJ	LL	NN	PP	RR	SS	TT	Shipping Weight (less motor) lb		
												CL II	CL III	CL IV
HDBI-120	184T-215T	6	9/16"	5 3/4"		28 3/16"	3"	13 15/32"	30 3/16"	36 15/16"	4"	260	265	
HDBI-130	184T-256T	6	9/16"	6 1/4"		33 7/16"	3 7/8"	15 13/32"	35 7/16"	41 5/8"	4"	300	305	310
HDBI-150	184T-284T	6	9/16"	6 3/4"		34 7/16"	4 5/8"	17 3/4"	36 7/16"	45 1/2"	4"	350	350	360
HDBI-160	184T-286T	6	9/16"	7 5/16"		35 9/16"	5 9/16"	18 11/16"	37 9/16"	47 3/8"	4"	400	400	410
HDBI-180	184T-324T	6	9/16"	8"		38 7/16"	6 3/4"	21 3/16"	40 7/16"	52 3/8"	6"	510	510	520
HDBI-200	254T-324T	6	9/16"	8 11/16"		39 13/16"	7 3/4"	22 3/16"	41 13/16"	54 3/8"	6"	580	580	590
HDBI-220	254T-364T	6	9/16"	9 1/2"		43 15/16"	9 1/8"	26 11/16"	45 15/16"	63 3/8"	6"	680	680	690
HDBI-240	254T-364T	6	9/16"	10 11/32"		48 1/8"	10 3/8"	28"	50 1/8"	66"	6"	810	810	820
HDBI-270	254T-364T	6	9/16"	11 9/32"		50"	11 7/8"	29 1/2"	52"	69"	6"	970	970	980
HDBI-300	254T-405T	6	9/16"	12 7/16"		56 1/16"	13 5/8"	31 1/4"	58 1/16"	72 1/2"	6"	1165	1165	1170
HDBI-330	254T-444T	8	3/4"	14 1/2"	30 7/32"	60 7/16"	10"	32 11/16"	62 7/16"	75 3/8"	6"	1560	1560	1760
HDBI-360	254T-444T	8	3/4"	15 13/16"	31 13/32"	62 13/16"	11 1/2"	32 11/16"	64 13/16"	75 3/8"	6"	1840	1840	1910

C.D. Belt Center Distance

Model	184T		213T-215T		254T-256T		284T-286T		324T-326T		364T-386T		404T-405T		444T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDBI-120	23 5/8"	25 7/8"	21 15/16"	24 11/16"												
HDBI-130	27 1/2"	29 5/8"	25 7/8"	28 5/8"	23 15/16"	27 3/16"										
HDBI-150	31"	33"	29 5/16"	32 1/8"	27 3/8"	30 5/8"	25 15/16"	29 11/16"								
HDBI-160	32 5/8"	34 13/16"	30 7/8"	33 9/16"	28 7/8"	32 1/16"	27 7/16"	31 1/16"								
HDBI-180	37 1/4"	23 5/8"	35 5/8"	38 1/4"	33 5/8"	35 11/16"	32 1/8"	35 3/4"	29 13/16"	34 1/8"						
HDBI-200					34 13/16"	37 15/16"	33 3/8"	36 15/16"	31 1/16"	35 5/16"						
HDBI-220					42 15/16"	40 1/16"	41 1/2"	45 1/8"	39 3/16"	43 1/2"	37 3/16"	42 3/16"				
HDBI-240					45 1/8"	48 3/16"	43 11/16"	47 3/16"	41 5/16"	45 9/16"	39 5/16"	44 1/4"				
HDBI-270					47 3/4"	50 3/4"	46 1/4"	49 3/4"	43 15/16"	48 1/8"	41 15/16"	46 3/4"				
HDBI-300					50 7/8"	53 13/16"	49 7/16"	52 13/16"	47 1/16"	51 1/8"	45 1/16"	49 3/4"	42 7/16"	47 13/16"		
HDBI-330					58 5/8"	61 9/16"	57 3/16"	60 1/2"	54 13/16"	58 13/16"	52 13/16"	57 7/16"	53 1/8"	58 13/16"	51 9/16"	57 11/16"
HDBI-360					59 3/16"	62"	57 3/4"	60 15/16"	55 5/16"	59 3/16"	53 5/16"	57 13/16"	53 1/2"	59"	51 7/8"	57 13/16"

INLET AND OUTLET FLANGES



1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.

Note: Flanges will be drilled unless otherwise specified.

Outlet flange is not available on Down Blast, Top Angular Down or Bottom Angular Down fan discharge positions for any models without a discharge extension. Outlet flange is standard on all HDBI-270 through HDBI-360.

Dimensions shown in table are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.

Model	A	B	C** note 1	D**	E	F	H	J	K	L	M	N	P	AA**	DD**
HDBI-120	16"	14 3/8"	4 1/16"	9 3/8"	13 3/8"	17 11/16"	2	7 27/32"	2	5 11/16"	8	8	7/16"	13 1/4"	13 3/4"
HDBI-130	17 3/8"	15 15/16"	4 1/16"	10 3/8"	14 3/8"	19 3/16"	2	8 19/32"	2	6 3/16"	8	8	7/16"	14 5/8"	15 1/4"
HDBI-150	19 1/4"	17 1/2"	4 1/16"	11 3/8"	15 3/8"	20 3/4"	3	6 1/4"	2	6 11/16"	10	8	7/16"	16 1/8"	16 13/16"
HDBI-160	21 1/8"	19 3/8"	4 1/16"	12 1/2"	16 1/2"	22 7/16"	3	6 13/16"	2	7 1/4"	10	8	7/16"	18"	18 7/16"
HDBI-180	23 1/2"	21 1/2"	4 1/16"	13 7/8"	17 7/8"	24 1/2"	3	7 1/2"	2	7 15/16"	10	12	7/16"	20"	20 3/8"
HDBI-200	25 1/2"	23 1/2"	4 1/16"	15 1/4"	19 1/4"	26 3/8"	3	8 1/8"	3	5 3/4"	12	12	7/16"	22"	22 3/8"
HDBI-220	28 1/8"	26 1/8"	4 1/16"	16 7/8"	20 15/16"	28 7/8"	4	6 23/32"	3	6 5/16"	14	12	7/16"	24 5/8"	24 7/8"
HDBI-240	30 3/4"	28 3/4"	6 1/16"	18 9/16"	22 5/8"	31 3/8"	4	7 11/32"	3	6 7/8"	14	16	7/16"	27"	27 3/8"
HDBI-270	33 3/4"	31 5/8"	6 1/16"	21 7/16"	24 1/2"	34 1/8"	4	8 1/32"	3	7 1/2"	14	16	7/16"	30"	30 1/16"
HDBI-300	37 1/4"	35 1/4"	6 1/16"	22 3/4"	25 3/4"	37 5/8"	5	7 1/8"	3	8 1/4"	16	16	7/16"	33 1/2"	33 9/16"
HDBI-330*	40 3/8"	38 3/4"	6 1/16"	24 7/8"	28 7/8"	40 7/8"	7	5 9/16"	5	5 3/8"	24	16	1/2"	36 3/4"	36 7/8"
HDBI-360*	43 5/8"	42"	6 1/16"	27 1/4"	31 1/4"	44 1/4"	7	6 1/32"	5	5 27/32"	24	16	1/2"	40"	40 1/4"

* HDBI-330 and HDBI-360 have fixed housings and are not rotatable in the field.

** Dimensions C, D, AA and DD are $\pm 1/8"$

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